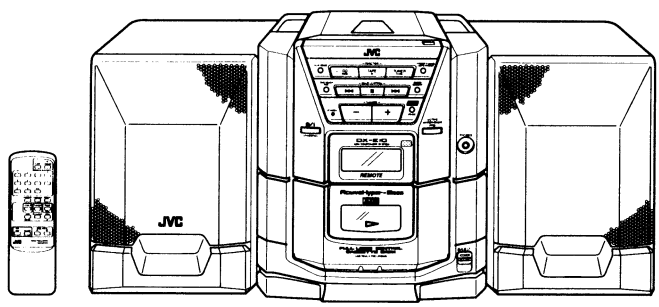
JVC

SERVICE MANUAL

CD PORTABLE COMPONENT SYSTEM

DX-E10BK B/E/EN/G



COMPACT disc DIGITAL AUDIO

Contents

- ■ Safety precautions ..... Page 2
- ■ Safety precaution about DX-E10BK 4
- ■ Instructions 5
- [1] Location of main parts 15
- [2] Removal of main parts 17
- [3] Main adjustment 20
- [4] Traubleshooting 24
- [5] Wireing Connections 33
- [6] Block diagram
  - ■ Integrated circuit 34
  - ■ Signal diagram 38
- [7] Standerd schematic diagram
  - ■ Tuner circuit 39
  - ■ Cassette amplifier circuit 40
  - ■ CD amplifier circuit 41
  - ■ Power amplifier circuit 42
  - ■ System control circuit 43
- [8] Location of P. C. board and parts List
  - ■ Main board 44
  - ■ Tuner board 49
  - ■ CD amplifier board 50
- [9] Exploded view of enclosure assembly
  - ■ Speaker section M1 51
  - ■ Enclosure section M2 52
  - ■ Enclosure section M3 54
- [10] Exploded view of mechanism assembly
  - ■ Cassette mechanism 56
  - ■ CD mechanism 58
- [11] Packing 59

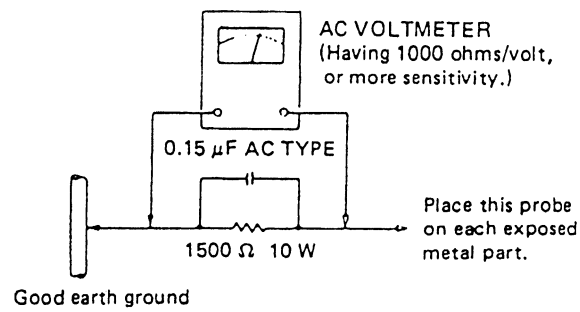
No. 10024
March 1997

1. Safety Precautions

1. The design this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacture's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety — related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of service manual. Electrical components having such features are identified by shading(▨) and (⚠) on the schematic diagram and parts list in the service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps , tubings, barriers and the like to be separated from live parts, high temperature parts, mpving parts and or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
5. Leakage current check (Electrical shock hazard testing)

   After re — assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

   • Plug the AC line cord directly into the AC outlet. using a"Leakage current tester", measure the leakage current from each exposed metal part of the cabinet, particulary any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exposeed 0.5mA AC(r.m.s.)

   
   AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15 μF AC TYPE
1500 Ω 10 W
Place this probe on each exposed metal part.
Good earth ground

   • Alternate check method

   Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohms 10W resistor paralleled by a 0.15 μ F AC type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC(r.m.s.).This corresponds to 0.5mA AC(r.m.s.).

Warning (UK ONLY)

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintaintaind.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Caution !

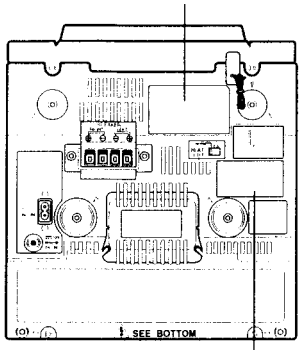
Pay careful attention to burrs left on the chassis as they were borne by press and machine work.
When servicing, carefully handle the chassis not to get injured by burrs on it.

IMPORTANT FOR LASER PRODUCTS

PRECAUTIONS

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the rear cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. **CAUTION:** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent the emission of radiation when the CD tray is open. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls for adjustments and the performance of procedures other than those specified herein may result in exposure to hazardous radiation.

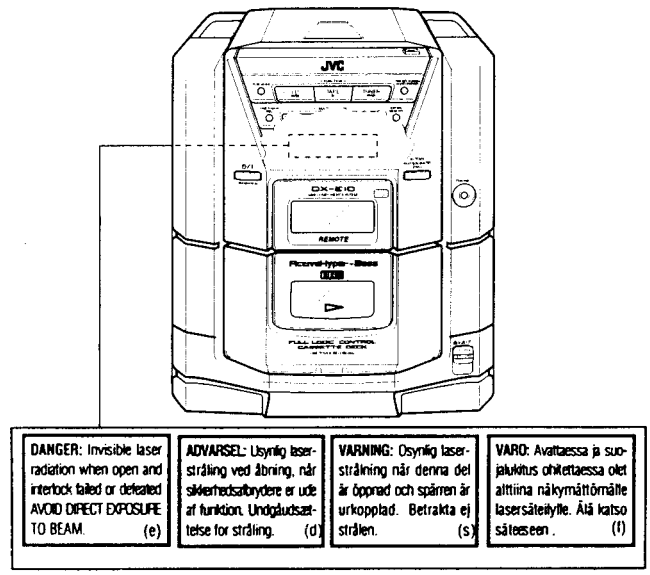
Name/Rating plate



CLASS	1
LASER	PRODUCT

Caution:
This production contains a laser component of higher laser class than Class 1.

REPRODUCTION OF LABELS AND THEIR LOCATION


JVC
DANGER: Invisible laser radiation when open and interlock failed or defeated AVOID DIRECT EXPOSURE TO BEAM. (e)
ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgåudsættelse for stråling. (d)
VARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)
VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)

ADVERSEL: Usynlig laserstråling ved åbning. når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS: Varmuuskytkimen oliessa pois päältä kun laite avataan, siellä kehittyy näkymätöbtä lasersäteilä. Älä pane itseäsi säteilyn altiiksi.

VARNING: Osynlig laserståining uppstår vid komponentens öppning när säkerhetsbrytaren är frånslagen.

ADVARSEL: Usynling laserstråling ved åpning når sikkerhetsbryteren er ude af funktion Unngå utsettelse for stråling.

UK ONLY

IMPORTANT (In the United Kingdom)
Mains Supply (AC 230 V~, 50 Hz only)

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.
BE SURE to replace the fuse only with an identical approved type, as originally fitted, and to replace the fuse cover.
If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.
The wires in the mains lead on this product are coloured in accordance with the following code:

Blue to N (Neutral) or Black
Brown to L (Live) or Red

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

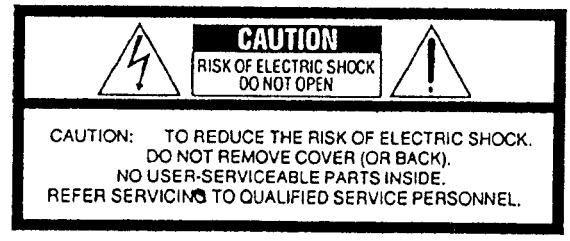
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT – CONSULT A COMPETENT ELECTRICIAN.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

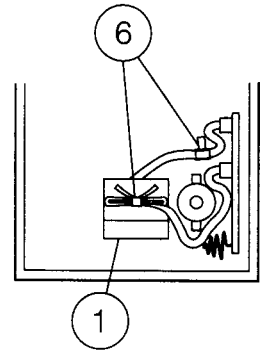
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

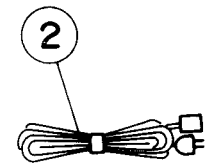
■Important control point concerning safety

1. Check the power transformer marking, and check that the power transformer is securely installed.
   Parts number: VTP57A2-12L

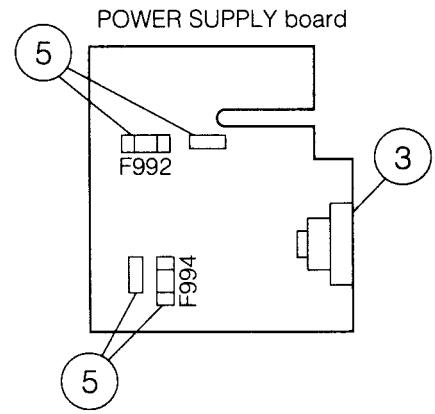


2. Check the power cord marking, and check that the power cord is not externally damaged.

	J VERSION	C VERSION
Cord mark:	SPT – 2	SPT – 2
Attachment plug:	KP-10W or SU-1P	KP-10W or SU-1P
Connect plug:	KS-15W or SU-6P	KS-15W or SU-6P

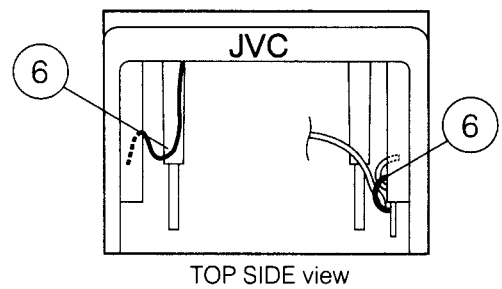


3. Check the AC socket marking, and check that the AC socket is tightly fixed in the P.C.board when installed.
   HSC1566 or HJC021A



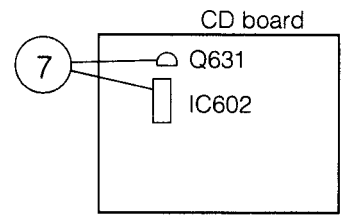
4. Check that there is sufficient space for the primary and adjacent secondary terminal parts on the P.C.board (There should be no protrusions of solder or terminal wires.)

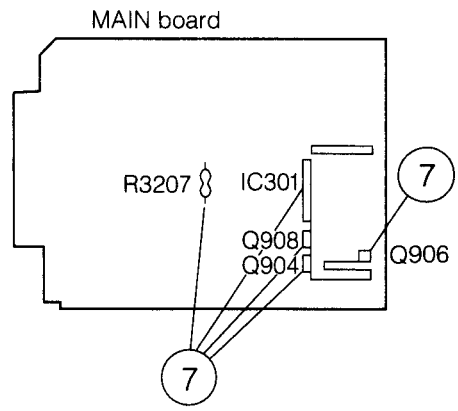
5. Check the rated fuse display, and check that the fuse is secure in the fuse holder. F992: 3A/250V
   F994: 3A/250V



6. Check that the wires are neatly arranged so that they do not interfere with sections involving power, moving parts, heat generation, or those with sharp-edged parts.

7. The following parts are important for safety in such operations as those involved with heat generation. Use the specified parts and check original shape. Heat generating parts should be suspended above the P.C.board not fallen down. Parts marked with [ ] are safety control parts.
   IC301, Q908, [R3207], [Q906], [Q631], IC602, Q904





TROUBLESHOOTING

What appears to be trouble is not always serious. Make sure first....

1. **Power cannot be turned on.**
   * Is the power cord unplugged?
2. **No sound from the speakers.**
   * Are headphones connected?

• CD Player Section

3. **The CD player does not play.**
   * Is the disc upside down?
   * Is the disc dirty?
4. **A certain portion of the disc does not play correctly.**
   * Is the disc scratched?

• Cassette Deck Section

5. **Playback sound is at a very low level.**
   * Is the head dirty?
6. **The ONE TOUCH REC button does not function.**
   * Have the safety tabs of the cassette been broken off?

• Tuner Section

7. **Reception is noisy.**
   * Try adjusting the antenna.

• Timer Section

8. **Sleep timer operation does not start.**
   * Is the sleep timer mode (SLEEP) displayed?

• Remote Control

9. **Remote control is impossible.**
   * Are the batteries in the remote control exhausted?
   * Is the remote sensor section exposed to bright light (direct sunlight, etc.)?

Note:
Before making an important recording, be sure to make a test recording first to check that the deck, etc. is working correctly.

SPECIFICATIONS

Compact disc player section

Type	: Compact disc player
Signal detection	: Non-contact optical pickup
Number of channels	: 2 channels
Frequency range	: 20 Hz – 20,000 Hz
Signal-to-noise ratio	: 90 dB
Wow & flutter	: Less than measurable limit

Radio section

Frequency ranges	: FM: 87.5 – 108 MHz AM: (MW) 522 –1,629 kHz (LW) 144 –288 kHz
Antennas	: Wire antenna for FM Ferrite core antenna for AM

Tape deck section

Track system	: 4-track 2-channel stereo
Motor	: Electronic governor DC motor for capstan
Heads	: Hard permalloy head for recording/-playback, 2 Gap ferrite head for erasure
Frequency response	: 63 – 12,500 Hz
Wow and flutter	: 0.2% (WRMS)
Fast wind time	: Approx. 180 sec (C-60 cassette)

General

Power output	: Max. 14 W (7 W +7 W) at 3 Ω 10 W (5 W + 5 W) at 3 Ω (10% THD)
Output jacks	: Headphones (0–20 mW/ch, 32 Ω) (matching impedance 16 Ω – 1 kΩ)
Power supply	: AC 230 V, 50 Hz Ext. DC 12 V (Car battery via optional CA-R120E car adapter)
Power consumption	: 17 W (with ⏻/I (STANDBY/ON) button ON) 3 W (with ⏻/I (STANDBY/ON) button STANDBY)
Dimensions	: 551 (W) x 259 (H) x 212 (D) mm including knobs
Weight	: Approx. 6.2 kg
Accessories provided	: AC power cord x 1 Remote control unit (RM-RXP1010) x 1 "R6/AA (15F)" batteries x 2 (for the remote control)

Speaker Section (each unit)

Speaker	: 10 cm x 1
Impedance	: 3 Ω
Dimensions	: 160 (W) x 240 (H) x 230 (D) mm
Weight	: Approx. 1.5 kg

Design and specifications are subject to change without notice.

DX-E10B MINI COMPONENT SYSTEM

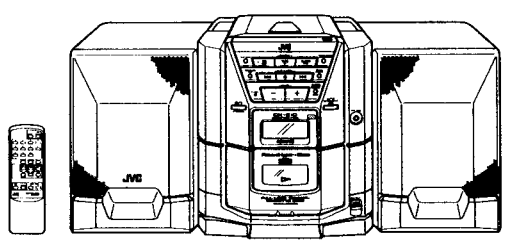
JVC

■ Instructions

MINI COMPONENT SYSTEM

DX-E10 B

COMPACT disc DIGITAL AUDIO



INSTRUCTIONS

JVC
VICTOR COMPANY OF JAPAN, LIMITED

© 1997 VICTOR COMPANY OF JAPAN, LIMITED

Printed in China
VNN9305-671C

DX-E10BK B/E/EN/G

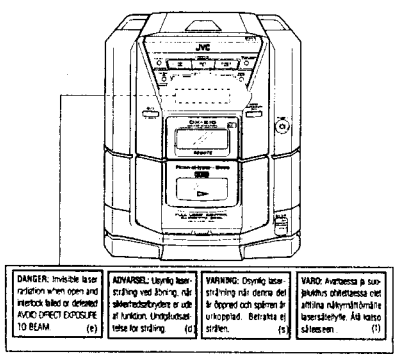
Thank you for purchasing this JVC product. Please read these instructions carefully before starting operation to be sure to obtain optimum performance and a longer service life from the unit.

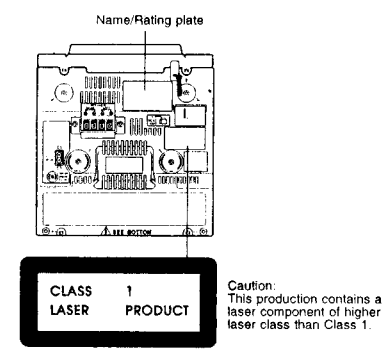
CONTENTS

Features 3
Safety precautions 3
Handling precautions 4
Connections 5
Power supply 5
Names of parts and their functions 6
Remote control unit 8
Switching the power on/STANDBY 9
Volume, sound and other controls 10
Concerning compact discs 10
Playing compact discs 11
Cassette tape 14
Cassette playback 15
Radio reception 15
Recording 18
Sleep timer operations (using the remote control unit) 19
Maintenance 19
Troubleshooting ..... Back cover
Specifications ..... Back cover

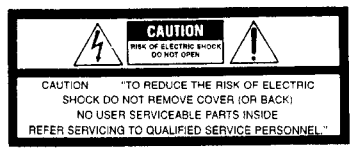
WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

REPRODUCTION OF LABELS AND THEIR LOCATION


DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM (e)
ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (d)
VARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)
VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen (f)



Caution:
This production contains a laser component of higher laser class than Class 1.


CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
CAUTION "TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT FOR LASER PRODUCTS

PRECAUTIONS

1. **CLASS 1 LASER PRODUCT**
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the rear cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. **CAUTION:** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent the emission of radiation when the CD tray is open. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls for adjustments and the performance of procedures other than those specified herein may result in exposure to hazardous radiation.

IMPORTANT (In the United Kingdom)
Mains Supply (AC 230 V ~, 50 Hz only)

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.
BE SURE to replace the fuse only with an identical approved type, as originally fitted and to replace the fuse cover.
If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue to N (Neutral) or Black
Brown to L (Live) or Red

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT-CONSULT A COMPETENT ELECTRICIAN.

FEATURES

1. **One-touch operation (COMPU PLAY)**
   - When a source button (CD, tape, or tuner) is pressed, the unit's power is turned on and initiates playback even when the power is set to STANDBY.
2. **26-key remote control unit operates the usual CD and tuner functions**
   - The remote control controls power ON/OFF switching, volume control, sound control and Active Hyper-Bass Pro ON/OFF switching.
3. **Multi-function CD player**
   - CD player with program play of up to 20 tunes/repeat play/random play function.
4. **Full logic cassette mechanism**
5. **2-Band digital synthesizer tuner with 30-station (15 FM and 15 AM (MW/LW)) preset capability**
   - Seek/manual tuning.
   - Auto preset tuning.
6. **Active Hyper-Bass Pro circuit for low-frequency sound reproduction**
7. **Timer function**
   - Sleep timer can be set for up to 2 hours.
8. **Beat Cut switch**

SAFETY PRECAUTIONS

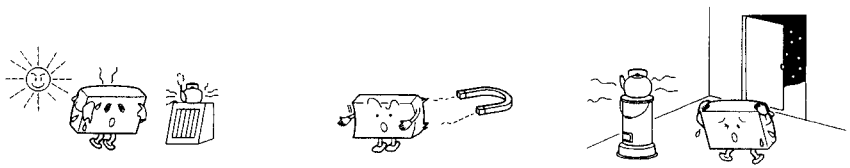
Prevention of Electric Shocks, Fire Hazards and Damage

1. Even when the ⏻/I (STANDBY/ON) button is set to STANDBY, a very small current will flow. To save power and for safety when not using the unit for an extended period of time, disconnect the power cord from the household AC outlet.
2. Do not handle the power cord with wet hands.
3. When unplugging from the wall outlet, always grasp and pull the plug, not the power cord.
4. Consult your nearest dealer when damage, disconnection, or contact failure is found with the cord.
5. Do not bend the cord sharply, or pull or twist it.
6. Do not modify the power cord in any manner.
7. Do not remove screws to disassemble the unit and do not touch anything inside the unit to avoid accidents.
8. Do not insert any metallic objects into the unit.
9. Unplug the power cord when there is a possibility of lightning.
10. If water gets inside the unit, unplug the power cord from the outlet and consult your dealer.
11. Do not block the ventilation holes of the unit so that heat can escape.
    Do not install the unit in a badly ventilated place.

⏻/I (STANDBY/ON) button
When the power cord is connected to a household AC outlet, the power indicator is lit red, indicating STANDBY mode. When the power is switched on, the STANDBY indicator goes out and the backlight in the display window lights up.

When this unit is plugged into an AC outlet, or connected with EXT DC power, it consumes a small current to operate the remote control and timer, or to back up the memory of the microprocessor, even when the ⏻/I (STANDBY/ON) button is set to STANDBY.

HANDLING PRECAUTIONS



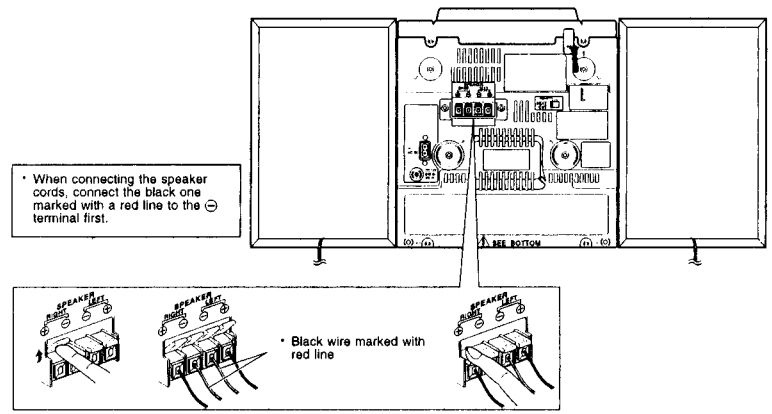
Do not use this unit in direct sunlight or leave the unit in closed automobiles (or yachts, etc.) where it would be exposed to high temperatures above 40°C.

1. **Avoid installing in the following places.**
   - Where it could be subject to vibrations.
   - Where it is excessively humid, such as in a bathroom.
   - Where it could be magnetized by a magnet or speaker.
2. **Pay attention to dust.**
   Be sure to close the CD holder so that dust does not collect on the lens.
3. **Condensation**
   In the following cases, condensation may occur in the unit, in which case the unit may not operate correctly.
   - In a room where a heater has just been switched on.
   - In a place where there is smoke or high humidity.
   - When the unit is moved directly from a cold to a warm room.

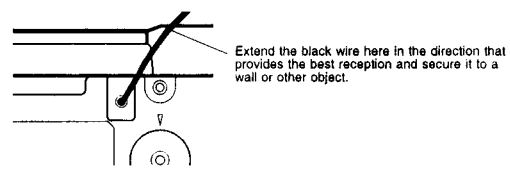
   In these cases, set the ⏻/I (STANDBY/ON) button to ON and wait 1 or 2 hours before use.
4. **Volume setting**
   Compact discs produce very little noise compared with analog records. When the volume control of an amplifier is adjusted by listening to the noise as is done with analog records, the speakers could be damaged by the sudden increase of output when the music starts. Therefore, turn down the volume before starting and adjust as required while playing a CD.
5. **Safety mechanism**
   This unit incorporates a safety interlock mechanism which switches the laser beam on and off, so that when the disc holder is open, the laser beam stops automatically.
6. **Do not place cassette tapes, etc. near the speakers.**
   Since there are magnets in the speakers, do not place tapes or magnetic cards on them as recorded data could be erased.
7. **Keep this unit away from your TV.**
   When this unit is used near a TV, the TV picture could be distorted. If this happens, move this unit away from the TV. If this does not correct the situation, avoid using this unit when the TV is turned on.
8. **Cleaning the cabinet**
   If the cabinet gets dirty, wipe it with a soft, dry cloth. Never use benzine or thinner as these could damage the surface finish.
9. **When listening with headphones**
   - Do not listen at high volumes as it could damage your hearing.
   - For safety, do not drive while listening to this unit.

CONNECTIONS

- Do not switch the power on until all connections are completed.


• When connecting the speaker cords, connect the black one marked with a red line to the ⊖ terminal first.
SEE BOTTOM
SPEAKER
RIGHT
LEFT
• Black wire marked with red line

Simple FM antenna



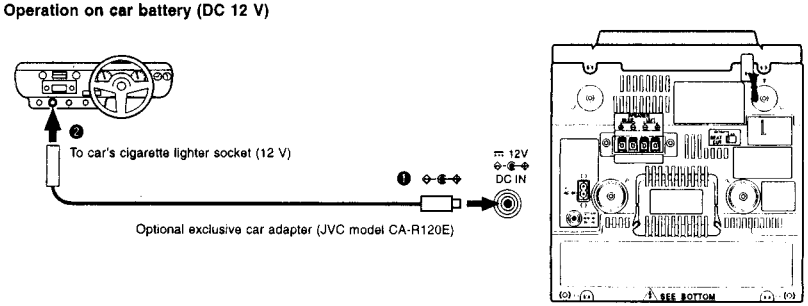
POWER SUPPLY

A. Operation on household AC

Connect the AC power cord.
- Connect the AC power cord after all other connections have been made.

CAUTION:
BE SURE TO UNPLUG THE POWER CORD FROM THE OUTLET WHEN GOING OUT OR WHEN THE UNIT IS NOT IN USE FOR AN EXTENDED PERIOD OF TIME.

B. Operation on car battery (DC 12 V)

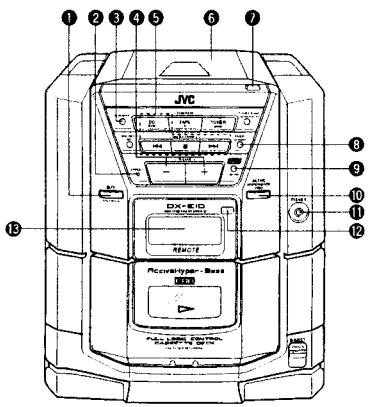


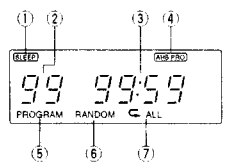
- First connect the car adapter to the DC IN 12 V jack, not the cigarette lighter socket, because shorting of a plug on the car may cause the fuse to blow out. In addition, be careful not to make a short-circuit between the plugs.
- **When using a car battery, be sure to use the specified car adapter (JVC model CA-R120E) to prevent mishaps or damage resulting from different polarity design.**

Note:
If the AC IN jack and the DC IN jack are both connected at the same time, the DC IN jack connection takes precedence.

NAMES OF PARTS AND THEIR FUNCTIONS

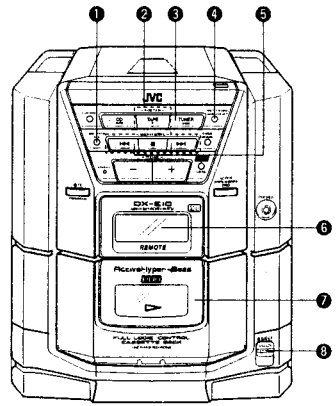
CD player/General section

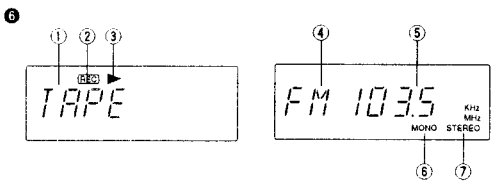




❶ ⏻/I (STANDBY/ON) button
❷ Power STANDBY indicator
❸ PLAY MODE button
This is used to select the CD play mode. Each time it is pressed, the mode changes in the following sequence:
(When CD play has stopped)
Normal play → Single tune repeat play (⊂) → All tunes repeat play (⊂ ALL) → Program play → Random play → Normal play ...
(During CD play)
Normal play → Single tune repeat play (⊂) → All tunes repeat play (⊂ ALL) → Normal play ...
❹ VOLUME buttons
+: Use to increase the volume.
–: Use to decrease the volume.
(control range from VOL 0 to VOL 25)
❺ CD operation buttons
Play/pause button (CD ► II)
Search buttons (⏮, ⏭)
Stop/clear button (■)
❻ CD holder
❼ CD holder open button (⏏)
❽ ENTER/MEMORY button
This is used to program the sequence in which the CD tracks are to be played.
❾ SOUND (PRESET EQ) button
❿ ACTIVE HYPER-BASS PRO button
On: The AHB PRO indicator lights in the display window. Set to this position to listen to Active Hyper-Bass Pro sound.
Off: The AHB PRO indicator goes out. Set to this position when Active Hyper-Bass Pro sound is not required.
⓫ Headphones jack (PHONES)
(3.5 mm dia. stereo mini)
Connect headphones (with impedance 16 Ω – 1 kΩ) to this jack. The speakers are automatically switched off when the headphones are connected.
⓬ Remote sensor section
⓭ Display window
① SLEEP indicator
② Track number display
③ Playback time display
Sleep time display
④ AHB PRO indicator
⑤ PROGRAM mode indicator
⑥ RANDOM playback indicator
⑦ Repeat playback indicator (⊂ ALL)

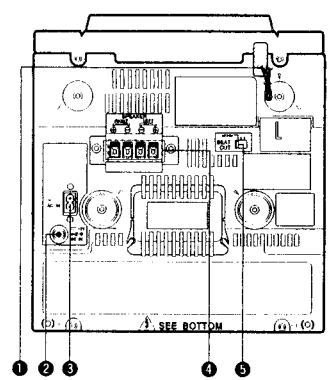
Deck/Tuner section





❶ ONE TOUCH REC button
❷ Cassette operation buttons
TAPE►: Press to play the tape.
⏮: Press to rewind the tape rapidly.
■: Press to stop the tape.
⏭: Press to wind the tape forward rapidly.
❸ TUNER/BAND button
Press to select TUNER mode.
Press to select the band (FM/AM).
❹ PRESET TUNING button
AUTO PRESET button
❺ TUNING buttons (⏮ / ⏭)
❻ Display window
① Tape mode display
② REC indicator
③ ► (Play) indicator
④ Band indicator (FM/AM)
⑤ Radio frequency display
Preset station display
⑥ MONO indicator
⑦ STEREO indicator
❼ Cassette holder
❽ Cassette holder EJECT button (⏏)

Rear panel



❶ Simple FM antenna
❷ DC IN 12 V jack (⊖⊂⊕)
❸ AC IN (AC input) jack
❹ SPEAKER terminals
Connect the provided speakers to these terminals.
❺ BEAT CUT switch (NORM 1, 2, 3)

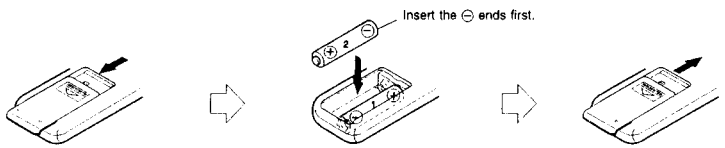
REMOTE CONTROL UNIT

Preparation before use

- **Installing batteries in the remote control unit**

1. Remove the battery cover from the back of the remote control unit.
2. Insert two "R6/AA (15F)" size batteries.
   - Insert the batteries with the ⊕ and ⊖ terminals matching the indication inside the battery compartment.
3. Replace the cover.

- **Battery replacement**
  When the remote control operation becomes unstable or the distance from which remote control is possible becomes shorter, replace the batteries with new ones.

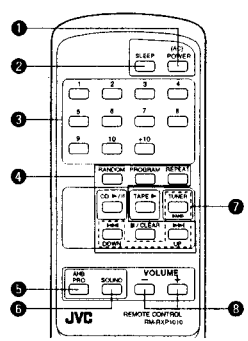


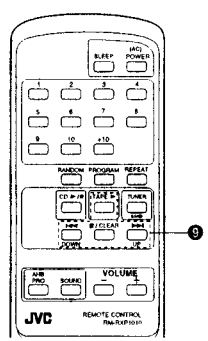
Using the remote control unit

To use the remote control unit, point it at the remote sensor section and press the buttons gently and firmly. Remote control operation is possible within about 7 m. However, since the remote control range is less when the unit is used at an angle, use directly in front of the remote sensor section, as far much possible.
Do not expose the remote sensor section to strong light (direct sunlight or artificial lighting) and make sure that there are no obstacles between the remote sensor section and the remote control unit.

The following operations can be performed using the remote control unit.

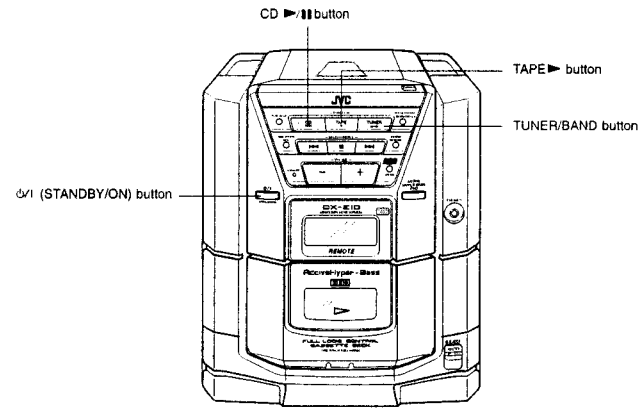
- **Check the functions of the operation buttons carefully and operate them correctly.**





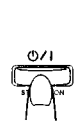
❶ POWER (AC) button
  Switch on the ⏻/I (STANDBY/ON) button of the main unit first, then perform operations.
❷ SLEEP button
❸ Track (tune) number buttons
  (No. 1 to No. 10, +10)
  Preset station buttons
  (No. 1 to No. 10, +10)
❹ CD operation buttons
  RANDOM : Random playback button
  PROGRAM : Program mode button
  REPEAT : Repeat playback button
  ■ /CLEAR : Stop/clear button
  CD►/II : CD mode/play/pause button
  ⏮ ⏭ : To scan to the beginning of a tune and to start forward or reverse search.
❺ ACTIVE HYPER-BASS PRO button
❻ SOUND button
❼ TUNER operation buttons
  TUNER/BAND : To select tuner mode and to select the band (FM/AM).
  TUNING
  DOWN/UP : To tune to a broadcast.
❽ VOLUME buttons (+, –)
❾ Cassette operation buttons
  TAPE► : Press to play the tape.
  ⏭ : Press to wind the tape forward rapidly.
  ■ /CLEAR : Press to stop the tape.
  ⏮ : Press to rewind the tape rapidly.

SWITCHING THE POWER ON/STANDBY



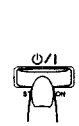
Switching the power on/STANDBY

- Switching on:



The red indicator goes off.

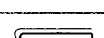
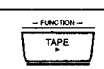
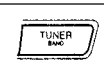
- Switching to STANDBY:



The red indicator lights.

COMPU PLAY

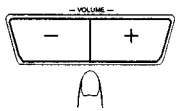
Even when the power is set to STANDBY, pressing the button shown below switches on the power and selects the source.

	Function mode	Operations
	**CD**	When this button is pressed with a CD loaded, CD playback begins.
	**TAPE**	When this button is pressed with a tape loaded, tape playback begins.
	**TUNER**	When this button is pressed, the tuner is engaged.

Note:
The COMPU PLAY button on the remote control has the same function as this unit.

VOLUME, SOUND AND OTHER CONTROLS

VOLUME buttons
+ : Use to increase the volume.
– : Use to decrease the volume.
(control range from VOL 0 to VOL 25.)



ACTIVE HYPER-BASS PRO button
ON : The AHB PRO indicator lights. Set to this position when listening to Active Hyper-Bass Pro sound.
OFF : The AHB PRO indicator goes out. Set to this position when Active Hyper-Bass Pro sound is not required.

Sound mode button
This unit has three preset sound modes (BEAT, POP, CLEAR). These modes can be selected to enhance the type of music being played.

- Press the SOUND button to select the sound mode.
- Each time the SOUND button is pressed the sound mode changes as follows;

BEAT → POP → CLEAR → FLAT

Sound mode selection
BEAT:
Set to this position for music with a heavy beat, such as rock or disco music.
POP:
Set to this position for light music including popular and vocal music.
CLEAR:
Set to this position for crisp and clear sounding music with transparent highs.
FLAT (No sound effect (flat characteristics)):
Set to this position when listening to classical music.

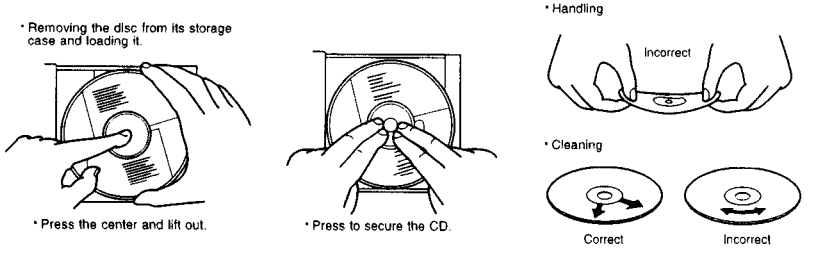
CONCERNING COMPACT DISCS

COMPACT disc DIGITAL AUDIO

Since dirty, damaged and warped discs may damage the unit, care should be taken of the following:

1. **Usable compact discs**
   Use compact discs with the mark shown.
2. **Notes on handling discs**
   - Do not touch the reflective recorded surface.
   - Do not stick anything to or write anything on the label side.
   - Do not bend compact discs.
3. **Storage**
   - After removing a disc from the unit, be sure to put it back in its case.
   - Do not expose discs to direct sunlight, high temperatures from a heater, etc., high humidity, or dust.
4. **Cleaning discs**
   Before loading a disc, wipe off any dust, dirt or fingerprints with a soft cloth. Discs should be cleaned by wiping radially, from the center to the edge.

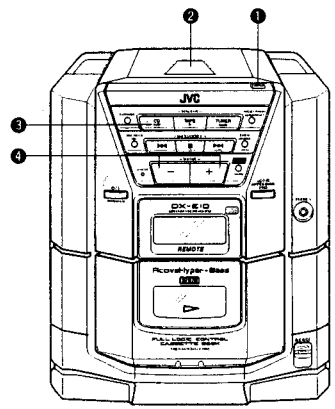
- **Never use thinner, benzine, record cleaner or antistatic spray.**



PLAYING COMPACT DISCS

Playing an entire disc ... The following example assumes a compact disc with 12 tunes and a total playing time of 48 minutes 57 seconds.

Operate in the order shown.

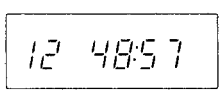


1. Press to open the CD holder.
2. Load a disc with the label side facing up. Close the CD holder with your hand.
3. Press to start play.
4. Adjust.

- 8-cm compact discs can be used in this unit without an adapter.

To stop play

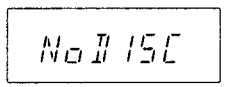
- **To stop in the middle of a disc**
  During playback, press the ■ (stop) button to stop play.



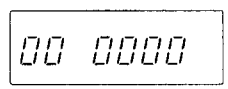
• The total number of tracks (tunes) and total playing time are displayed.

- **To stop a disc temporarily**
  Press the CD ►II button to stop play temporarily. When pressed again, play resumes from the point where it was paused.

Notes:
- The following indication may be shown when a disc is dirty or scratched, or when the disc is loaded upside down. In such a case, check the disc and insert again after cleaning the disc or turning it over.



or



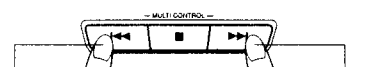
- **Do not use the unit at excessive high or cold temperatures. The recommended temperature range is from 5°C to 35°C.**
- After playback, unload the disc and close the CD holder.
- If mistracking occurs during play, lower the volume.
- Mistracking may occur if a strong shock is applied to the unit or if it is used in a place subject to vibrations (i.e. in a car travelling on a rough road).

Skip playback
- During playback, it is possible to skip forward to the beginning of the next tune or back to the beginning of the tune being played or the previous tune; when the beginning of the required tune has been located, play starts automatically.

To listen to the next tune ...
Press the ►►I button once to skip to the beginning of the next tune.

To listen to the previous tune ...
Press the I◄◄ button to skip to the beginning of the tune being played back and press again to skip to the beginning of the previous tune.

Search playback (to locate the required position on the disc)
- The required position can be located using fast-forward or reverse search while playing a disc.



- Hold down the button; search play starts slowly and then gradually increases in speed.
- Since low-volume sound (at about one quarter of the normal level) can be heard in the search mode, monitor the sound and release the button when the required position is located.

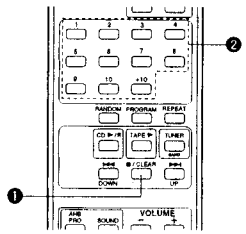
Direct access playback (using the remote control)

- Pressing any of the track number buttons will start play from the beginning of the designated tune, without your having to press the CD ►/II button. (This function cannot be used during programmed play.)

❶ Press the ■ /CLEAR button to set to the CD mode.
❷ Designate the required tune using the track number buttons.
- To designate tune numbers 1 to 10, press the track number button corresponding to the tune (track) number.
- To designate tune number 11 or higher, press the +10 button the required number of times, then the track number button, (Example: To designate the 20th tune, press the +10 button once, then press track number button 10.)

- +10 button:
  Each time this button is pressed, the number increases by 10. First press this button to set the 10's digit, then press the track number button to set the 1's digit.

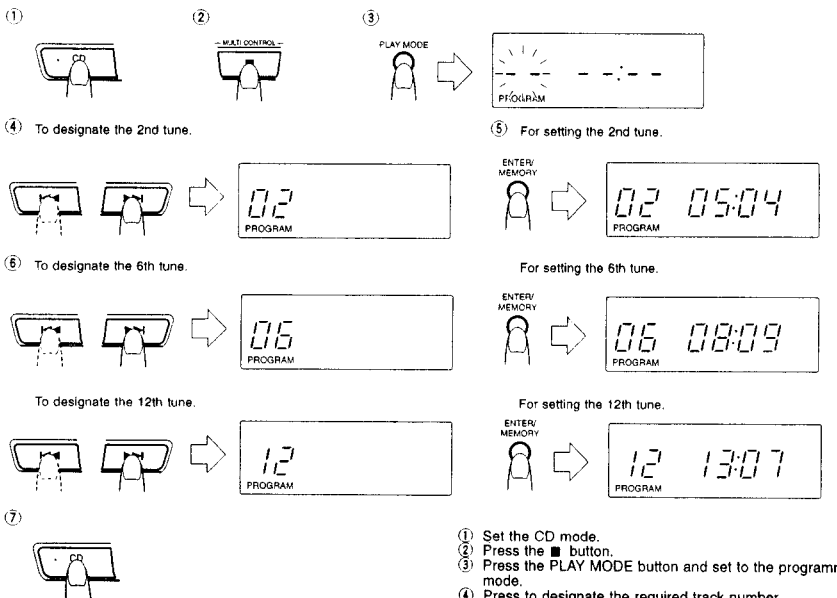
- **To skip to another tune during play**
  When the required track number buttons is pressed, the display shows the designated track number and play starts from the beginning of the designated tune.



Programmed play (using the controls of the main unit)

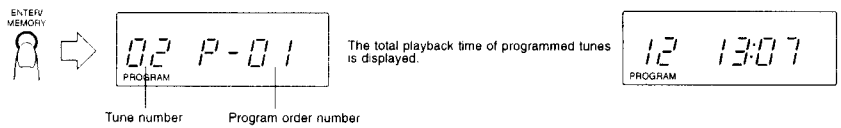
- Up to 20 tunes can be programmed to be played in any required order.
  The total playing time of programmed tunes is displayed (up to 99 minutes, 59 seconds).

(Example: When programming the 2nd tune to be played first, the 6th tune next, and then the 12th tune, etc.)



① Set the CD mode.
② Press the ■ button.
③ Press the PLAY MODE button and set to the programming mode.
④ Press to designate the required track number.
⑤ Press the ENTER/MEMORY button to set the required track number.
⑥ Designate the remaining tunes by pressing the track number and ENTER/MEMORY buttons.
⑦ Press the CD ►/II button when programming is completed. Programmed playback starts.

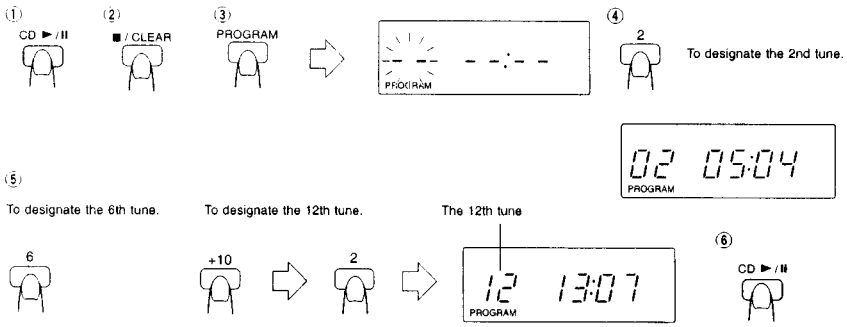
To confirm the details of a program ...
After setting the program, press the ENTER/MEMORY button; the tunes making up the program will be displayed in programmed order.



To clear the programmed tunes ...
Press the ■ button before playing a disc. During programmed playback, press this button twice. You can also press the PLAY MODE button to set a mode besides PROGRAM mode. When the CD holder is opened, programmed tunes are cleared automatically.

Programmed play (using the remote control)

- Up to 20 tunes can be programmed to be played in any required order.
  The total playing time of programmed tunes is displayed (up to 99 minutes, 59 seconds).
  (Example: When programming the 2nd tune to be played first, the 6th tune next, and then the 12th tune, etc.)



① Set the CD mode.
② Press the ■ /CLEAR button.
③ Press the PROGRAM button to set to the programming mode.
④ Press to designate the required track number.
⑤ Designate the remaining tunes by pressing the track number buttons.
⑥ Press the CD ►/II button when programming is completed. Programmed playback starts.

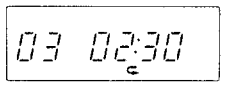
To confirm the details of a program ...
Press the PROGRAM button; the tunes making up the program will be displayed in programmed order.

To clear the programmed tunes ...
Press the ■ /CLEAR button before playing a disc. During programmed playback, press this button twice. You can also press the PLAY MODE button to set a mode besides PROGRAM mode. When the CD holder is opened, programmed tunes are cleared automatically.

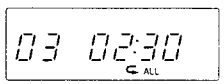
Notes:
1. If the total playing time of the programmed tunes exceeds 99 minutes 59 seconds, the total playing time indication will go out.
2. When programming a track (tune) whose number is 21 or above, the total playback time is not displayed.
3. When performing CD synchro recording, step ⑥ above is not required.

Repeat play (using the controls of the main unit)

Before and during playback, you can use the PLAY MODE button to select a single tune repeat play (⊂) or all tunes repeat play (⊂ ALL) mode. A single tune or all the tunes can be repeated.



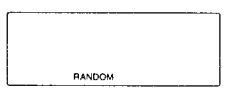
or



- **Repeat playback of a single tune (⊂)**
  The tune being played back will be heard repeatedly.
- **Repeat playback of all tunes (⊂ ALL)**
  When playing back an entire disc, all tunes will be heard repeatedly.

Random playback (using the controls of the main unit)

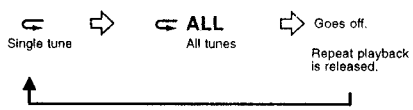
To use RANDOM playback, select RANDOM mode using the PLAY MODE button when the CD mode is at CD play stop. With the RANDOM mode setting, every tune in a disc is played back once in random order.



Repeat play (using the remote control)

Press the REPEAT button before or during play. A single tune or all the tunes can be repeated.

Whether a single tune or all tunes are to be repeated can be specified. Each time the REPEAT button is pressed, the mode will change from a single tune (⊂), to all the tunes (⊂ ALL), to the clear mode, in this order.



Random playback (using the remote control)

When the RANDOM button is pressed, every tune in a disc is played back once, in random order.

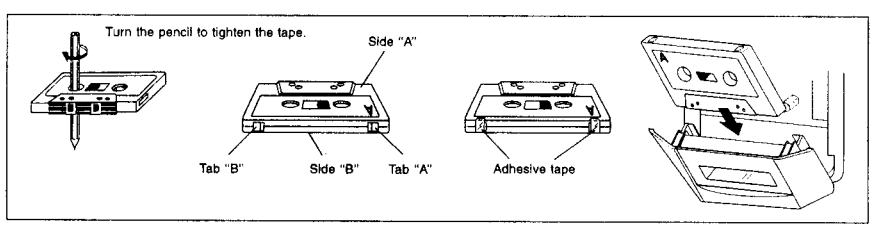
CASSETTE TAPE

Cassette tape

1. Loose tape may cause trouble. With a pencil, gently tighten the tape as shown.
2. To prevent recordings from being erased accidentally, remove the tab(s) with a screwdriver. Reseal the slots with adhesive tape to erase and re-record after the tabs have been broken off.

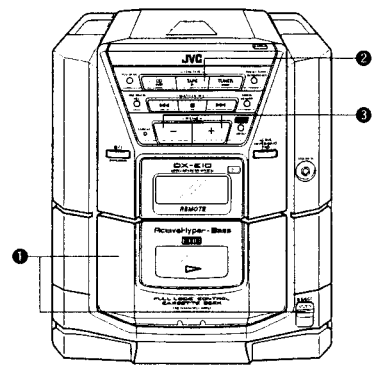
Cassette loading

1. Press the ⏏EJECT button to open the cassette holder.
2. Load a cassette as shown.
3. Close the cassette holder by pressing it gently. Listen for the click that tells you that you've closed the holder securely.



CASSETTE PLAYBACK

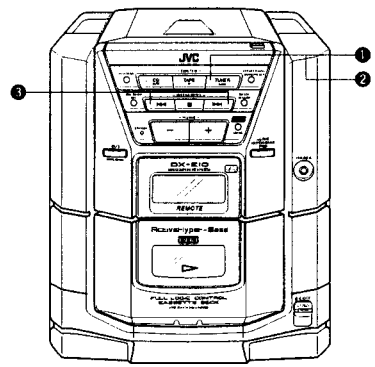
Operate in the order shown.



❶ Load a cassette tape.
❷ Press to start playback. (The power is switched on, TAPE mode is engaged and tape playback starts.)
❸ Adjust.

RADIO RECEPTION

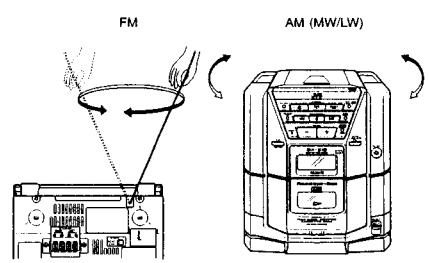
Operate in the order shown.



❶ Press the TUNER/BAND button.
  • The power is switched on and a band and radio frequency will be shown in the display.
❷ Select the band.
  FM (Auto) → FM MONO → AM*
❸ Tune to the required station.

• The AM radio features 522 to 1,629 kHz coverage for MW and 144 to 288 kHz coverage for LW.

Using antennas



Extend the simple FM antenna. Look for the optimum location for reception, and then secure to a wall or other stable structure.

STEREO AUTO/MONO mode

Auto mode:
Set to this mode when listening to or recording an FM stereo broadcast. The STEREO indicator in the display window lights when the FM stereo broadcast is received.

MONO:
Set to this mode when FM stereo reception is noisy. When another station is tuned to in mono mode, the unit automatically enters Auto mode.

Seek tuning

Press the ▶▶| or |◀◀ button for one second or more; the unit enters the seek tuning mode and tunes to higher or lower frequencies, and when the broadcast is received, it stops tuning automatically and the broadcast can be heard.

Manual tuning

Each time the ▶▶| or |◀◀ button is pressed, the unit steps through the current frequency band. Tuning is in steps of 50 kHz for FM and 9 kHz for AM.

Press to move to lower frequency. Press to move to higher frequency.

Notes:
- When seek tuning to the required station is not possible because it is broadcasting too weak a signal, press the ▶▶| or |◀◀ button momentarily to perform manual tuning.
- When the power is set to STANDBY, or another mode (TAPE or CD) is selected, the last tuned frequency is stored in memory. When the power is switched on again and TUNER/BAND button is pressed, the same station will be heard.

Auto preset tuning (Press for a moment or two)

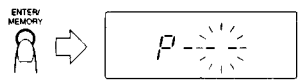
This function scans the current band (FM or AM), detecting frequencies used to broadcast signals, and stores the first 15 frequencies in memory automatically.
- Press the AUTO PRESET button for more than 2 seconds. The frequencies of stations broadcasting signals can be preset automatically in the order of increasing frequency (15 stations in each band (FM and AM)).

Note:
- The previous preset station is erased when a new station is set as the new station's frequency replaces the previous frequency in memory.

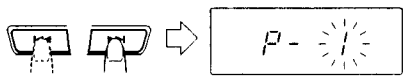
Presetting stations (using the controls of the main unit)

15 stations in each band (FM and AM) can be preset as follows:

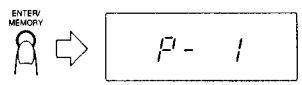
❶ Tune to the required station.
❷ Press the ENTER/MEMORY button.



❸ Select the number to be preset using the |◀◀ and ▶▶| buttons.



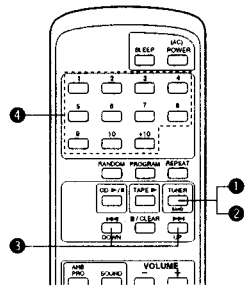
❹ Press the ENTER/MEMORY button to set the preset No.

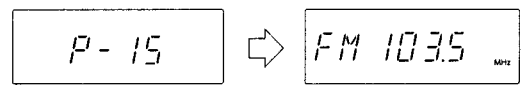


- The station chosen using procedure ❶ is preset to P-1. Other bands and stations can be preset in the same way.

Presetting stations (using the remote control unit)

15 stations in each band (FM and AM) can be preset as follows:
- Example (when presetting an FM station broadcasting at 103.5 MHz to preset button "15")





❶ Press the TUNER/BAND button.
❷ Select the FM band using the TUNER/BAND button.
❸ Tune to the required station.
❹ Press preset button "+10", then "5" for more than 2 sec. (When "15" blinks in the preset station display, the station has been preset.)

- Repeat the above procedure for each of the other stations, using a different preset button each time.
- Repeat the above procedure for the AM band.

- **To change preset stations**
  Perform step ❹ above after tuning to the required station.

Notes:
- The previous preset station is erased when a new station is set as the new station's frequency replaces the previous frequency in memory.
- When listening to an AM broadcast, noise may be heard if the remote control is used.

- All preset stations will be erased when a power failure occurs for more than 24 hours or the power cord is unplugged for more than 24 hours. In such cases, preset the stations again.

Preset tuning

- The stations must be preset before this operation can be performed.

(Using the controls of the main unit)

① Press the TUNER/BAND button.
② Select the band (FM or AM) using the TUNER/BAND button.
③ Press the PRESET TUNING button to select the required preset station.

(Using the remote control unit)

① Press the TUNER/BAND button.
② Select the band (FM or AM) using the TUNER/BAND button.
③ Press the required preset station buttons (No. 1–No. 10, +10).
- The preset station number and frequency corresponding to the button pressed are shown.

RECORDING

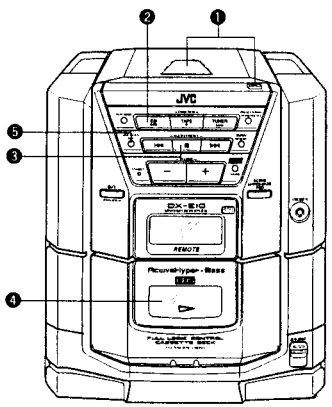
- In recording, the ALC circuit automatically optimizes the recording level; adjustment of the recording level is unnecessary.
- Check that the safety tab on the cassette tape is not broken off.

Note:
This unit has recording/playback characteristics suitable for normal tapes. Normal tapes have different characteristics from CrO_2 and metal tapes.

Synchronized recording with the CD player

- In this system, the CD player starts playback when the cassette deck enters the recording mode.

Operate in the order shown.



❶ Load a disc and close the CD holder.
❷ Set CD mode.
❸ Press the ■ (stop) button to set stop mode.
❹ Load a cassette in the deck with side A facing up.
(Wind past the leader tape before starting recording.)
❺ Press the ONE TOUCH REC button; synchronized recording will start. (The REC indicator in the display window lights.)
- When you want to do programmed recording, first program the required tracks (see pages 12 – 13). Then, perform the procedure in step ❺ above.
- You can also record with the CD in repeat play.

- Non-recorded sections of approx. 4 seconds are automatically left between tunes.
- When the CD player stops, the tape deck stops automatically.
- To stop recording in the middle, press the ■ (stop) button.

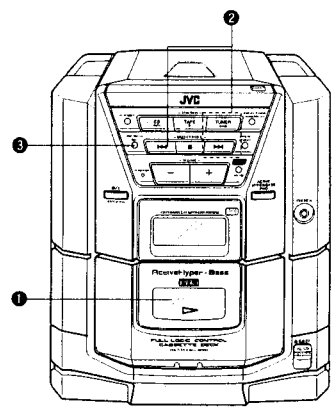
- **When automatic spacing between tunes is not required ...**
Perform the following after finishing the previous operation (❶ to ❹).
① Press the CD ►/II button of the CD player twice.
The CD player enters the pause mode.
② Press the ONE TOUCH REC button.
Now, the CD player starts playback simultaneously.

Note:
- During CD synchro recording, the CD ►/II and SEARCH (I◄◄ / ►►I) buttons do not function.

It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

Recording from the radio

Operate in the order shown.



❶ Load a cassette with side A facing up.
(Wind past the leader tape before starting recording.)
❷ Press the TUNER/BAND button. Tune to the required station.
❸ Press the ONE TOUCH REC button.
- Recording will start.
- The function switch is locked and its position cannot be changed.

BEAT CUT switch (on the rear panel)

When recording an AM broadcast, beats may be produced which are not heard when listening to the broadcast. In such a case, set this switch after setting the deck to record mode so that the beats are eliminated. Normally set this switch to "NORM 1".

Erasing

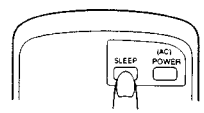
When recording on a pre-recorded tape, the previous recording is automatically erased and only the new material can be heard when the tape is played.

To erase a tape without making a new recording ...
Press the TAPE► button of the deck to set to the TAPE mode and press the ONE TOUCH REC and TAPE► buttons together after pressing the ■ (stop) button.

SLEEP TIMER OPERATIONS (using the remote control unit)

- **Use this when you want to fall asleep while listening to a tape, broadcast or CD**

① Set the required source and tune (tuner) or playback (CD or tape).
② Press the SLEEP button to set to the sleep time.



SLEEP is shown in the display.

30 → 60 → 90 → 120

Source mode display
(Releasing the sleep mode)

- Sleep times of 30, 60, 90, or 120 minutes can be set. When you release the SLEEP button, the source is displayed after 5 sec.

- The sleep timer operation will start and the power will be switched off after the specified time.

- **Checking the sleep time**
When the SLEEP button is pressed, the remaining sleep time is displayed. If it is pressed again, a new sleep time can be set.

- **To cancel the sleep timer operation**
Press the ⏻/I (STANDBY/ON) button to switch to STANDBY or press the SLEEP button until the sleep time indicator disappears.

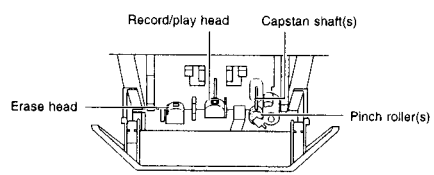
MAINTENANCE

Cleaning is important!
When the tape is running, magnetic powder and dust naturally accumulate on the heads, capstan and pinch roller. When they become too dirty ...
- sound quality deteriorates.
- the output sound level drops.
- the previous sound is not completely erased.
- recording is not performed satisfactorily.

Because of this, you should clean the heads, etc. every 10 hours of use, so that perfect recording is possible.

Cleaning the heads, capstan and pinch roller

Open the cassette holder.
Clean the heads, pinch roller and capstan.
For effective cleaning, use a cleaning kit available from an audio store.
After cleaning, be sure that the cleaning fluid has dried completely before loading a cassette.



Cautions:
1. Keep magnets and metallic objects away from the head. If the head becomes magnetized, noise will increase and the tone will deteriorate. Demagnetize the head every 20–30 hours of use with a head eraser (available from an audio store). (When demagnetizing the head, the ⏻/I (STANDBY/ON) button should be set to STANDBY).
2. Do not use anything other than alcohol for cleaning. Thinner and benzine will damage the rubber pinch roller.

1 Location of main parts

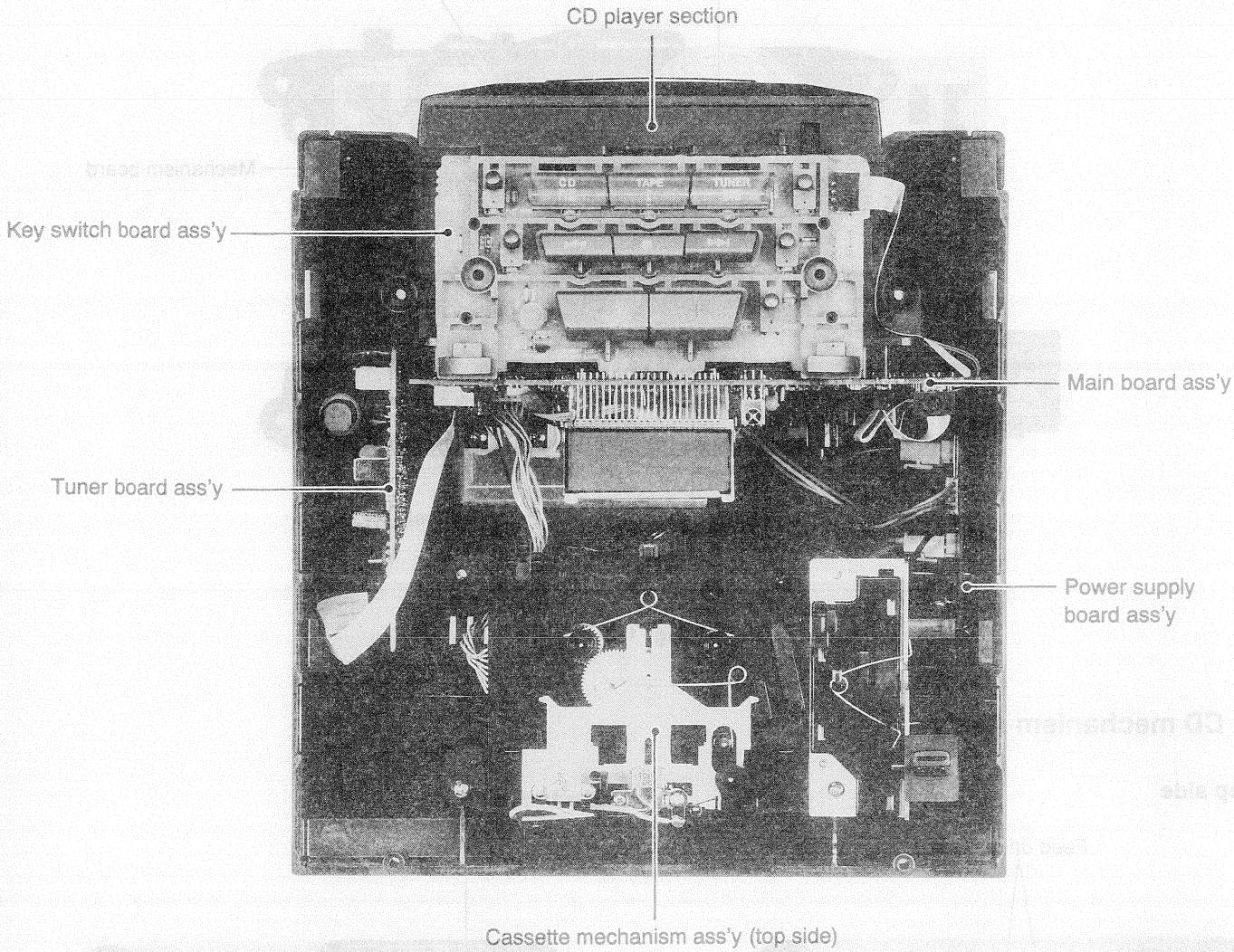


Fig. 1-1

■ Cassette mechanism Ass'y

Bottom side

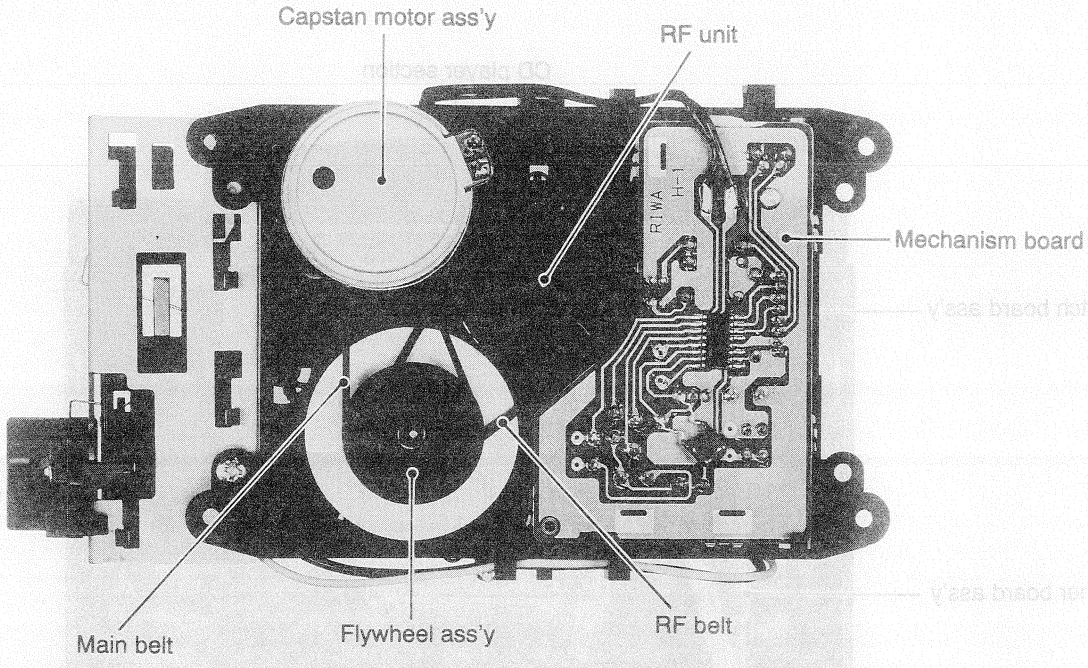


Fig. 1-2

■ CD mechanism Ass'y

Top side

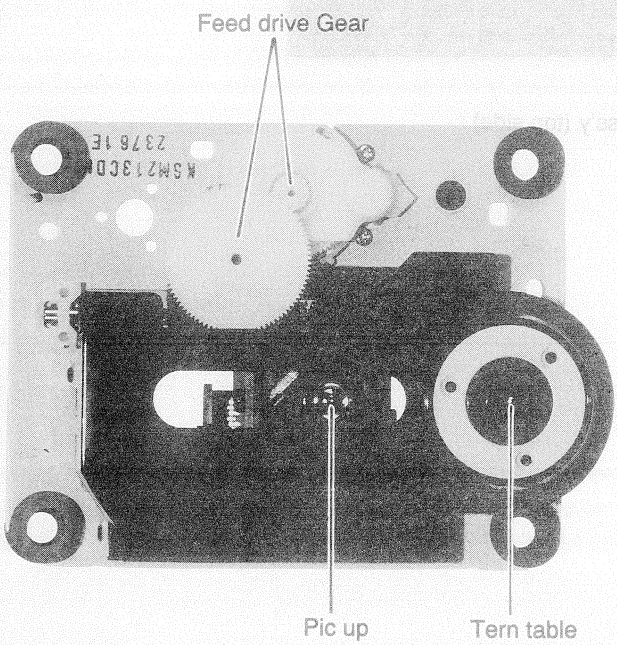


Fig. 1-3

Bottom side

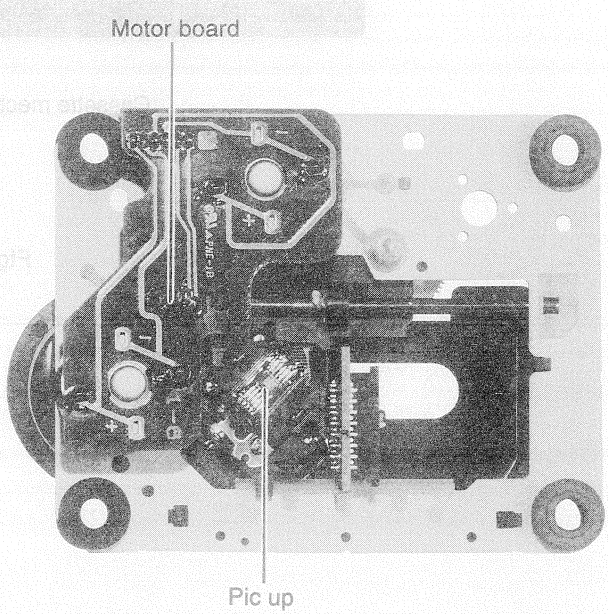


Fig. 1-4

2 Removal of main parts

■ Enclosure section

◆ **Front panel assembly** (See Fig. 2-1 and 2-2)

1. Remove the 6 screws ① from the back.
2. Remove the 2 screws ② securing the front panel from both sides.
3. Open the cassette door by pressing down the eject button to remove the front panel.

◆ **CD/amplifier unit section** (See Fig. 2-1 and 2-3)

1. Remove the 2 screws ③ securing the speaker terminals.
2. Disconnect the wire (CN303) connecting the tuner board assembly to the amplifier board.
3. Unplug the wire connecting the amplifier board assembly to the left side of the cassette mechanism.
4. Disconnect the head wire (CN311) from the main board assembly.
5. Unplug the wire (CN301) connecting the amp. board assembly to the power board assembly.

◆ Tuner board assembly (See Fig. 2-3 and 2-4)

1. It can be pulled out independently. Pull out the board assembly and disconnect the antenna terminal (TP1).

◆ Cassette mechanism assembly

1. Remove the 2 screws ④ securing the cassette mechanism assembly.

◆ To remove the cassette mechanism first, disconnect the head wire (CN311) from the amplifier board assembly and unplug the connector on the left side of the mechanism.

Rear side view

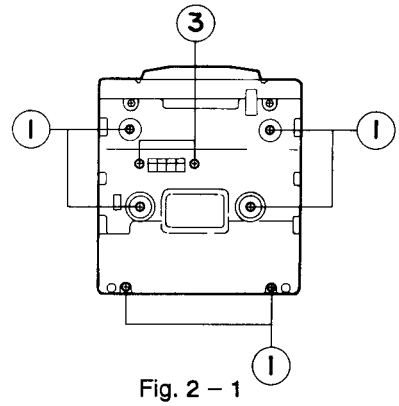


Fig. 2 – 1

Borth side view

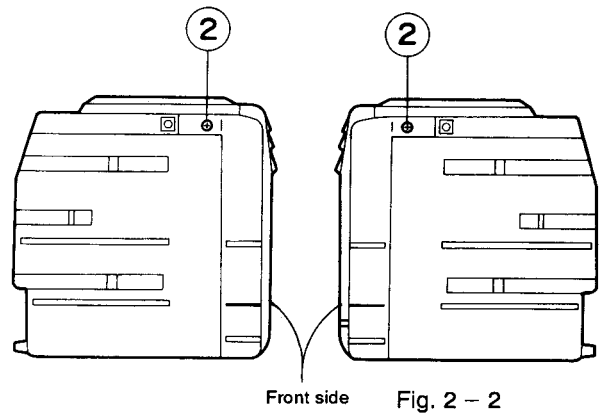


Fig. 2 – 2

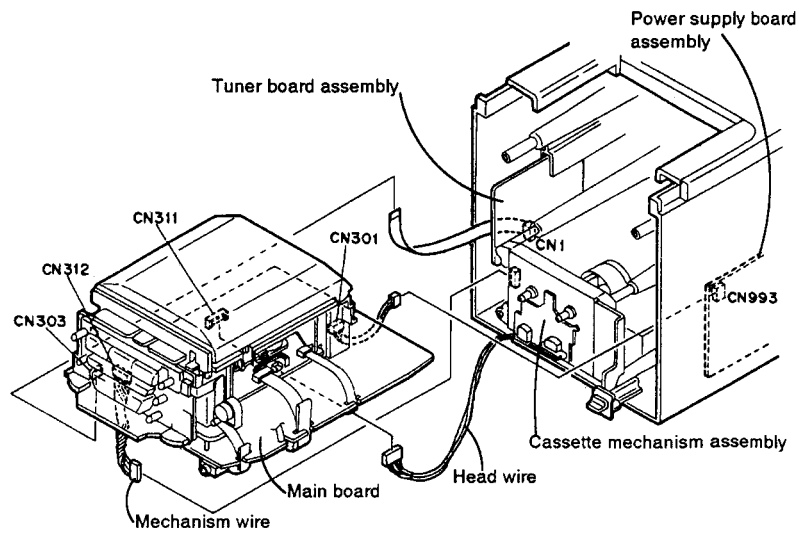


Fig. 2 – 3

Inside view

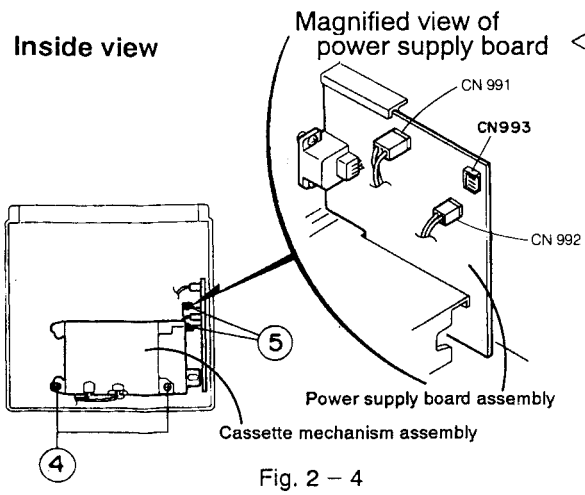


Fig. 2 – 4

◆ **Power supply board assembly** (See Fig. 2-4)

1. Disconnect the 2 wires (CN991, CN992) from the power transformer.
2. Remove the 2 screws ⑤ securing the AC jack.

◆ **CD/amplifier unit section**

◆ **Amplifier board assembly** (See Fig. 2-5 and 2-6)

1. Remove the 4 screws ⑥ securing the amplifier board assembly.
2. Unplug the 2 wires (CN603 and CN604) from the CD amplifier board assembly.
3. Unplug the wire (CN702) from the switch board assembly.
4. Release the 2 pawls fixing the CD door switch board assembly.

◆ **Switch board assembly** (See Fig. 2-7)

1. Release the 2 pawls fixing the switch board assembly.

◆ **CD amplifier board assembly** (See Fig. 2-8)

1. Remove the 2 screws ⑦ securing the CD amplifier board assembly.
2. While lifting the board assembly, remove the CD mechanism collector and pickup wire.

◆ **CD mechanism assembly** (See Fig. 2-9)

1. Remove the 4 screws ⑧ securing the CD mechanism at 4 corners.

Main board top side view

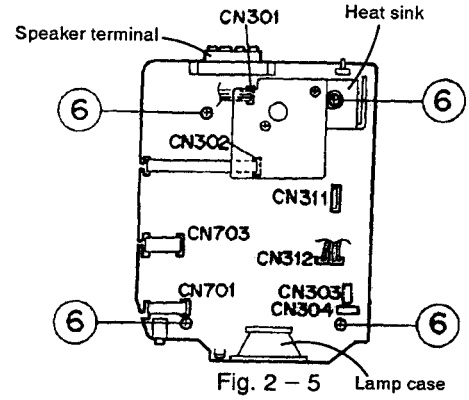


Fig. 2 – 5

Magnified view of wire connection

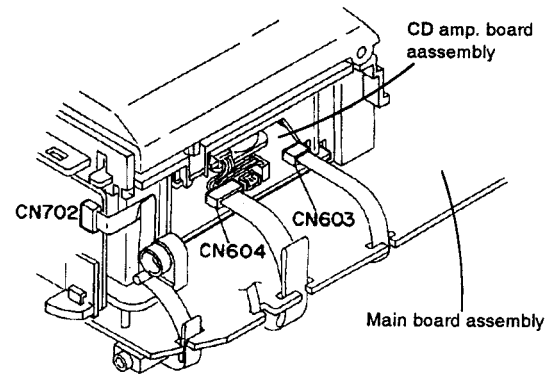


Fig. 2 – 6

Front view

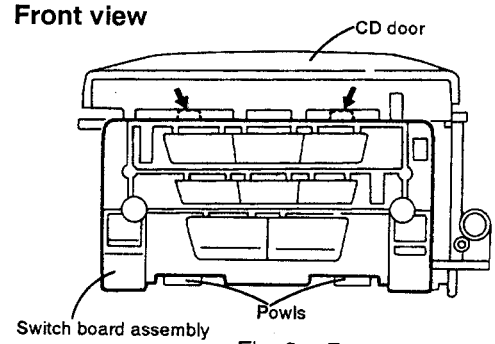


Fig. 2 – 7

CD unit bottom view

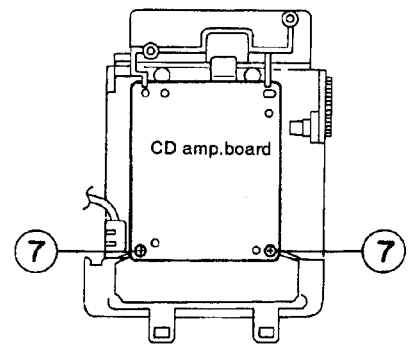


Fig. 2 – 8

CD Mechanism section

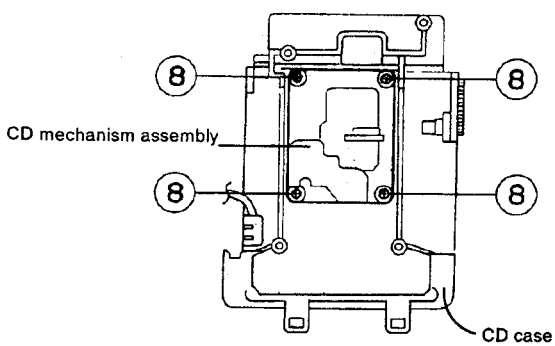


Fig. 2 – 9

■ Cassette mechanism section

◆ Recording/playback head (See Fig. 2-10 and 2-11)

1. Remove the fixing screw ① on the right side of the head.
2. Loosen the fixing screw ② on the left side of the head to pull out the head.

Side view of head installation

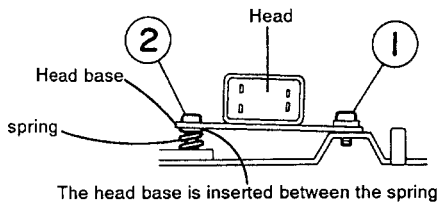


Fig. 2-11

◆ Erase head (Fig. 2-10)

1. Remove the 2 head fixing screws ③.

◆ Pinch roller assembly (See Fig. 2-10 and 2-12)

1. Detach the pinch roller assembly by disengaging the pinch roller hook.

◆ Mechanism board assembly (See Fig. 2-13)

1. Remove the board fixing screw ④.
2. Release the board stopping pawl and detach the board assembly.

◆ Motor assembly (See Fig. 2-10 and 2-13)

1. Remove the 2 motor fixing screws ⑤.
2. Detach the main belt.

◆ Capstan/flywheel assembly (See Fig. 2-12 to 2-14)

1. Remove the C washer fixing the capstan.
2. Disengage the RF belt.
3. Pull out the flywheel.

Magnified view of flywheel

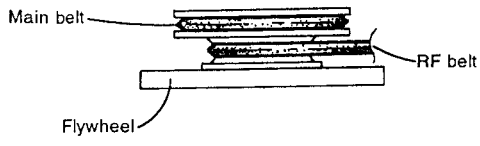


Fig. 2 – 14

Mechanism front side view

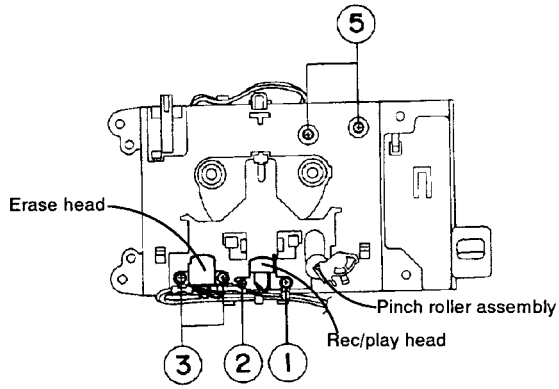


Fig. 2 – 10

Magnified view of pinch roller

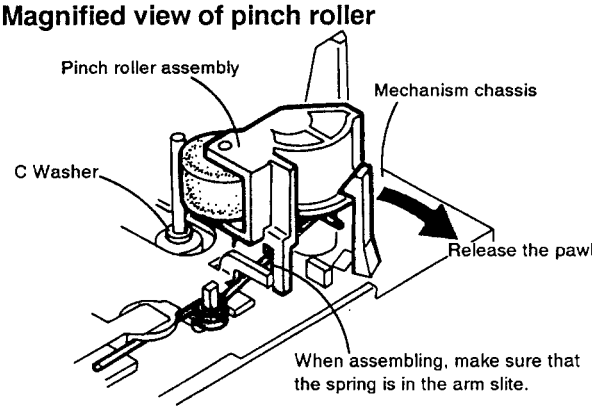

Pinch roller assembly
Mechanism chassis
C Washer
Release the pawl
When assembling, make sure that the spring is in the arm slite.

Fig. 2 – 12

Mechanism rear side view

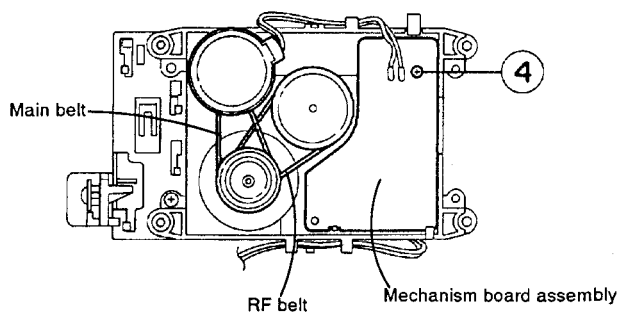


Fig. 2 – 13

3 Main adjustment

■ Test instruments required for adjustment

1. Low frequency oscillator
   - •Oscillation frequency:50Hz to 20kHz
   - •Output:dBs with 600 Ω terminator
2. Attenuator(impedance:600 Ω)
3. Electronic voltmeter
4. Resistor ····· 600 Ω for attenuator matching
5. Distortion meter
6. Torque gauge ····· Cassette type for CTG – N mechanism adjustment
7. Wow and Flutter meter
8. Frequency counter
9. Test Tapes

VT702 (8 kHz) ..... Head azimuth
VT712 (3 kHz) ..... Tape speed and wow & fluter
VT724 (1 kHz) ..... Playback output level
VT736 (1 kHz/8 kHz) ..... Frequency response check
AC-225 (TS – 12) ..... Normal tape (Rec/PB)

■ Measuring conditions(Amplifier section)

Supply voltage : ..... AC230 (50 Hz)
Reference output : Speaker ..... 0 dBs (0.775V)/3 Ω
: Headphone –10 dBs (0.245V)/32 Ω
Reference input : TP IN level ..... –25 dBs

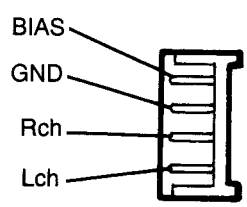
● Standard position of function switches

Function switch ..... TAPE
Mode switch ..... STEREO
Beat cut switch ..... normal or 1 position
Active Hiper-Bass pro switch ..... OFF
SEA ..... Flat position

● Standard position of volume control

Main volume adjust ····· Adjust 0dB(indicat VOL 20)
Measuring point ····· **CN304** or Headphone

CN304 Test point (DOLBY NR TEST POINT)



■ Measuring condition(Radio section)

(Radio alignment is not necessary for this model.)

AM frequency ····· 400Hz modulation 30%
FM frequency ····· 400Hz modulation frequency deviation 22.5kHz

● Standard position of switches and controlls

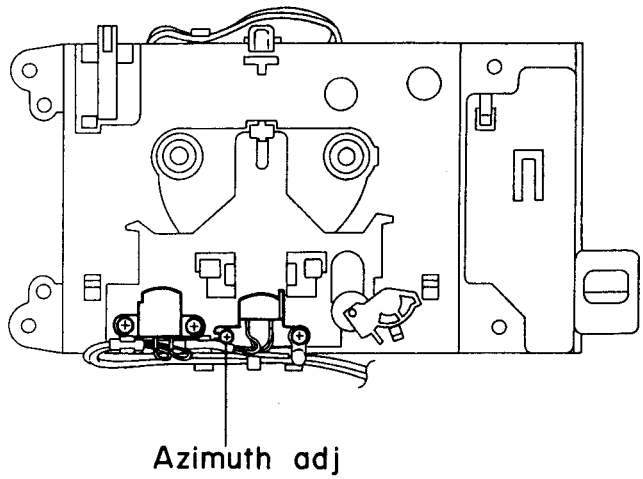
Function ····· RADIO
Mode ····· STEREO

● Careful points for adjustment

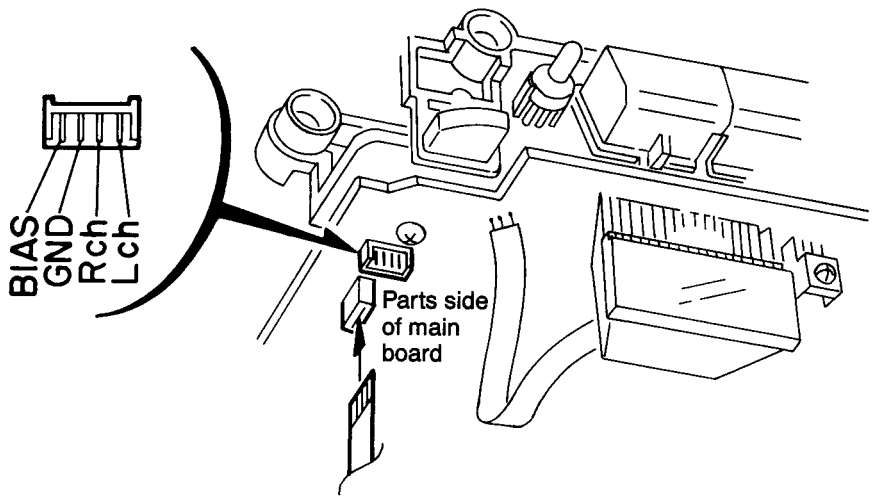
1. Connect 30 pF capacitor and 33k Ω resistor to the output side of the IF sweeper in series while 0.082 μ F capacitor and 1000k Ω resistor to the input side in series.
2. Set output level of the IF sweeper as minimum as adjustable.

■ Location of adjustment

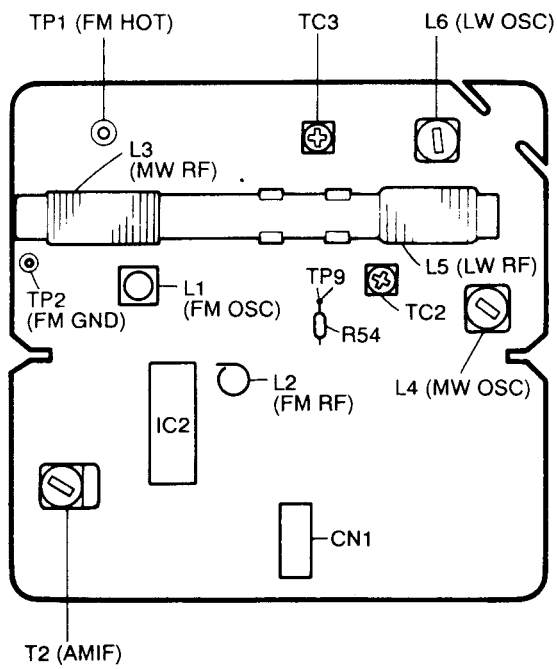
◆ Cassette mechanism



◆ Main board



◆ Tuner head



■ Cassette Amplifier Section

Item	Measuring condition	Check and adjustment procedure	Standard value	Adjusting part
Head azimuth adjustment	• Test tape: VT702 (8 kHz) • Signal output terminal: PHONES (with 32 Ω load)	1. Play back the test tape VT702 (8 kHz). 2. Adjust the head azimuth adjusting screw so that the phase difference between the R and L channels is minimized at an output level that is within ±2 dB of the maximum output level of the deck. **After this adjustment, lock the head azimuth adjusting screw with screw sealant to cover more than a half of the screw head.** 3. **When the head azimuth is maladjusted, correct it with the head azimuth adjusting screw in the playback operations alternately.**	• Output level: Within ±2 dB of maximum output level • Phase difference R and L channels: Minimum	Head azimuth adjusting screw (To be used only after head replacement)
Tape speed and wow/flutter check and adjustment	• Test tape: VT712 (3 kHz) • Sigfnal output terminal: PHONES (with 32 Ω load)	1. Play back the test tape VT712 (3 kHz) by the end portion. 2. Connect a frequency counter and check that it reads between **2910 and 3090 Hz.** If not, adjust the frequency with the semi-fixed resistor in the motor hausing . 3. Check that the wow/flutter is within **0.30%** (WTD)	• 2940 to 3090 Hz • Within **0.30%** (WTD)	• Tape speed: Variable resistor in the motor hausing . • Check only
PB frequency response check	• Test tape: VT736 • Signal output terminal: PHONES (with 32 Ω load)	Play back the test tape VT736 while confirming that deviation between the 1 kHz signal and 8 kHz signal should be +1 ± 4 dB.	Deviation between 1 kHz and 8 kHz: **+1 ± 4 dB**	
Bias frequency check	•Tape: Normal • Signal output terminal: Speaker	Set the BEAT CUT switch to the NORM-1, and check to see if the frequency at the measuring point is 72 k ± 4 kHz. If not, adjust the frequency to be **72 ± 4 kHz.** Then, change the setting of the BEAT CUT switch to the NORM-2 and NORM-3 positions to check to see if the measured frequency is equivalent to the standard value respectively.	Standard values • STD-1 position: **72 k ± 4 kHz** • STD-2 position: **69 k ± 4 kHz** • STD-3 position: **64 k ± 4 kHz**	
REC and PB frequency response adjustment *	• Test tape: AC225 • Signal input/output terminal: CN304/ PHONES	Set the TAPE SELECT switch to the NORMAL position and BEAT CUT switch to the STANDARD-1, and record the reference 1 kHz **(–25 dB)** signal and **10 kHz** signal alternately repeatedly. While playing back the recorded signals, check to see if the output level of the **10 kHz** signal differs from that of the 1 kHz signal by within **+2 ± 4 dB.**	Level difference between REC and PB: Within +2 ± 4 dB	
REC and PB sensitivity check *	• Test tape: VT724 (1 kHz), AC225 • Signal input/output terminal: **CN304**/ PHONES	Input the 1 kHz, **– 25 dBs** signal through the input terminal **CN304** and record it. While playing back the recorded signal, check to see if the playback output level at the measuring point is within 0 dBs as compared with the playback level of the test tape VT724.	Within +1dBs ± 3 dB	

* In the MW mode proceed to record

■ Tuner Sections

Item	Conditions	Adjustment & Confirmation Methods	Stand. values	Adjust
FM, AM IF adjustment		☆Since a solid IF is being used, no adjustment is required.		
MPX adjustment		☆Since a ceramic resonator is being used, no adjustment is required.		
FM tracking adjustment		☆Since a fixed coil is being used, no adjustment is required.		
LW Tracking adjustment	• Band : LW • Signal input Standard loop antenna • Test point : TP1(Positive) : TP2(Negative) : TP9 • Signal output : CN1	①Adjust L6 so that the CN1 output is maximum when 144kHz(preset 6) is received from the MW signal generator. ②Confirm so that the CN1 output is maximam when 288kHz is received from MW signal generator. ③Adjust L6 to obtain 1.1 ± 0.02V at TP9. ④Adjust L5 so that the CN1 output is maximum when 144kHz(preset 6) is received from the MW signal generator. ⑤Adjust TC3 so that the CN1 output is maximum when 288kHz(preset 7) is received from the MW signal generator. ⑥Repeat the item ④, ⑤, adjust for no further improvement.	Output level : Maxmum 1.1 ± 0.02V at TP9.	L6 L6 L5 TC3 L5, TC3
MW tracking adjustment	• Band : MW • Signal input Standard loop antenna • Test point : TP1(Positive) : TP2(Negative) : TP9 • Signal output : CN1	①Confirm so that the CN1 output is maximam when 522kHz(preset 1) is received from MW signal generator. ②Incase voltage at TP9 is more than 5.0V. adjust L4 to obtain 5.0 ± 0.1V at TP9. ③Adjust L3 so that the CN1 output is maximum when 603kHz(preset 3) is received from the MW signal generator. ④Adjust TC2 so that the CN1 output is maximum when 1404kHz(preset 4) is received from the MW signal generator. ⑤Repeat the item ④, ⑤, adjust for no further improvement.	Output level : Maxmum 5.0 ± 0.1V at TP9. Output level : Maxmum Output level : Maxmum	 L4 L3 TC2 L3 , TC2

4 Traubleshooting

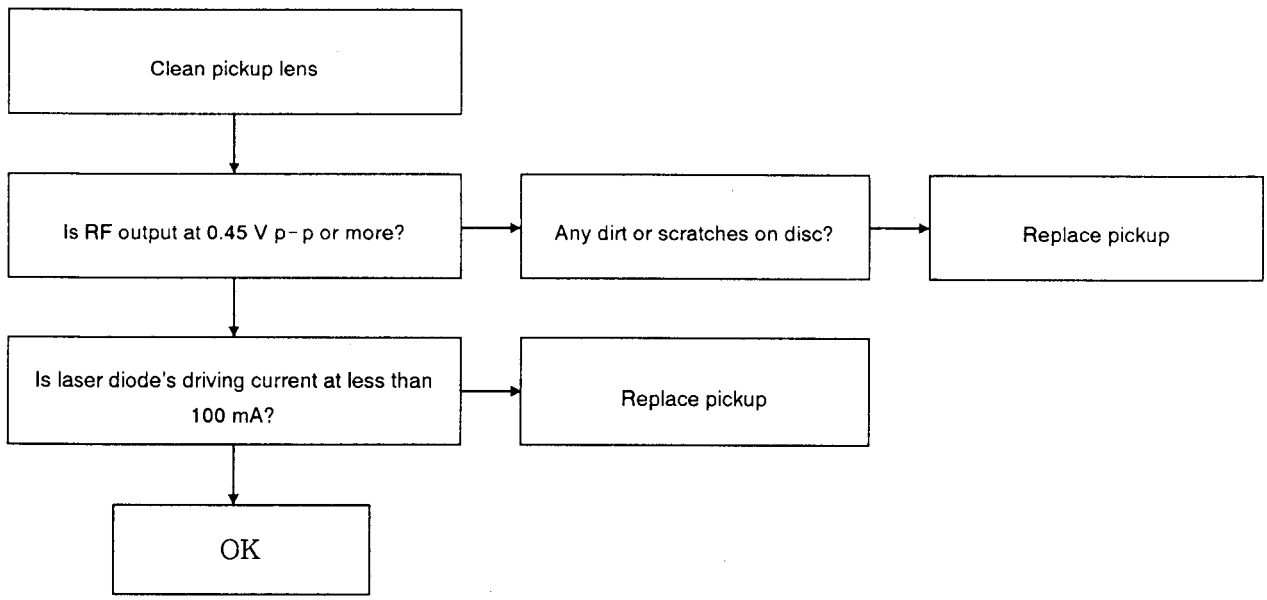
■ Pickup maintenance

(1) Checking the service life of laser diode

If a laser diode reaches the end of its service life, the following phenomena will show up. Similar symptoms may also appear when the pickuplens becomes too dirty. In this case, clean the lens.

1) The RF output (between IC601 ⑦ and ⑱(GND)) lowers.
2) The driving current, necessary for the laser diode to emit lights, increases. (Calculate from the voltage level at both ends of the R614 at 10 Ω .)

◆ Following the flow chart shown below, check the service life.


Clean pickup lens
Is RF output at 0.45 V p-p or more?
Any dirt or scratches on disc?
Replace pickup
Is laser diode's driving current at less than 100 mA?
Replace pickup
OK

◆ How to measure laser diode's driving current

After connecting a voltmeter at both ends of the R614(10 Ω), measure the voltage during playback. If the voltage level is at 1.0 V or more, the service life of the laser diode has expired.

Laser diode's driving current (A)
= Voltage level at both ends of R614 (V)/10 (Ω)
When voltage level is at 1.0 V:
1.0 V/10 Ω = 0.1 A = 100 mA

Note:
The laser diode easily breaks down. Be sure to turn the power off before connecting a voltmeter.

◆ HOW TO OPERATE THE CD SELF-DIAGNOSIS FUNCTION

◆ The CD Self-diagnosis Function

If any malfunction occurs in the CD player, this system can be set to make an error code indication appear on the LCD to point out the defective parts. This efficiently helps service personnel find the causes of the malfunction.

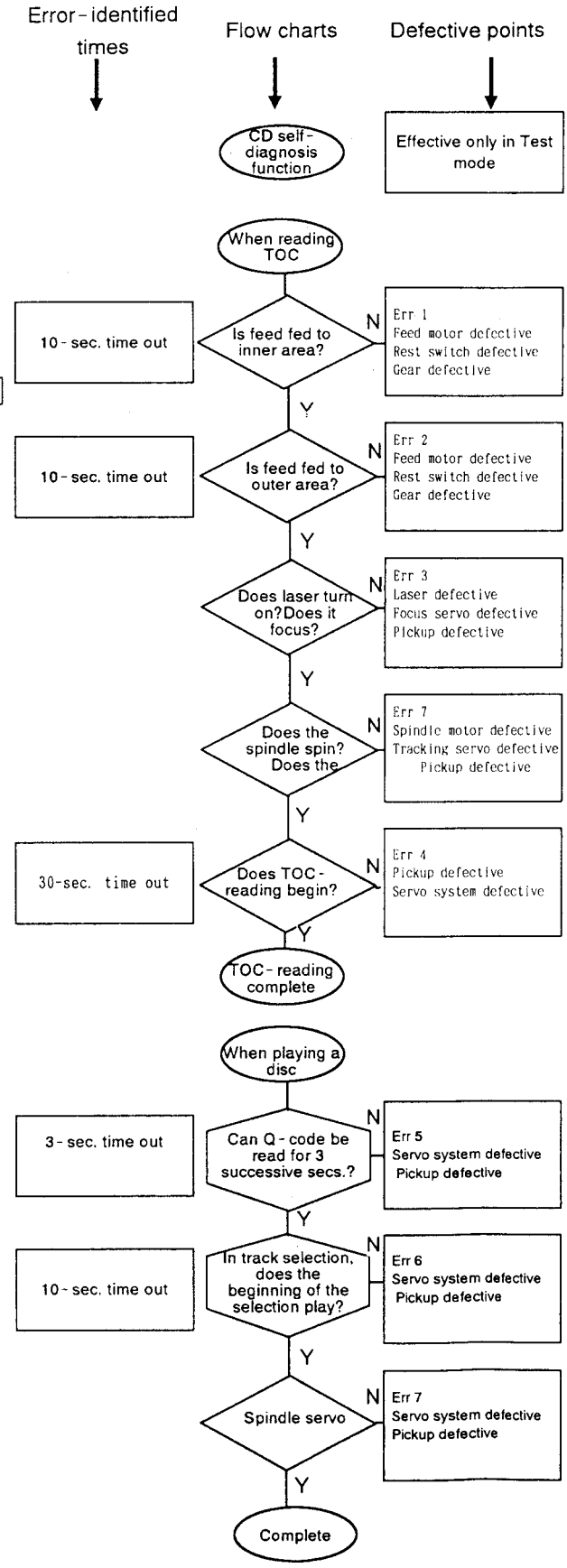
1. Operation

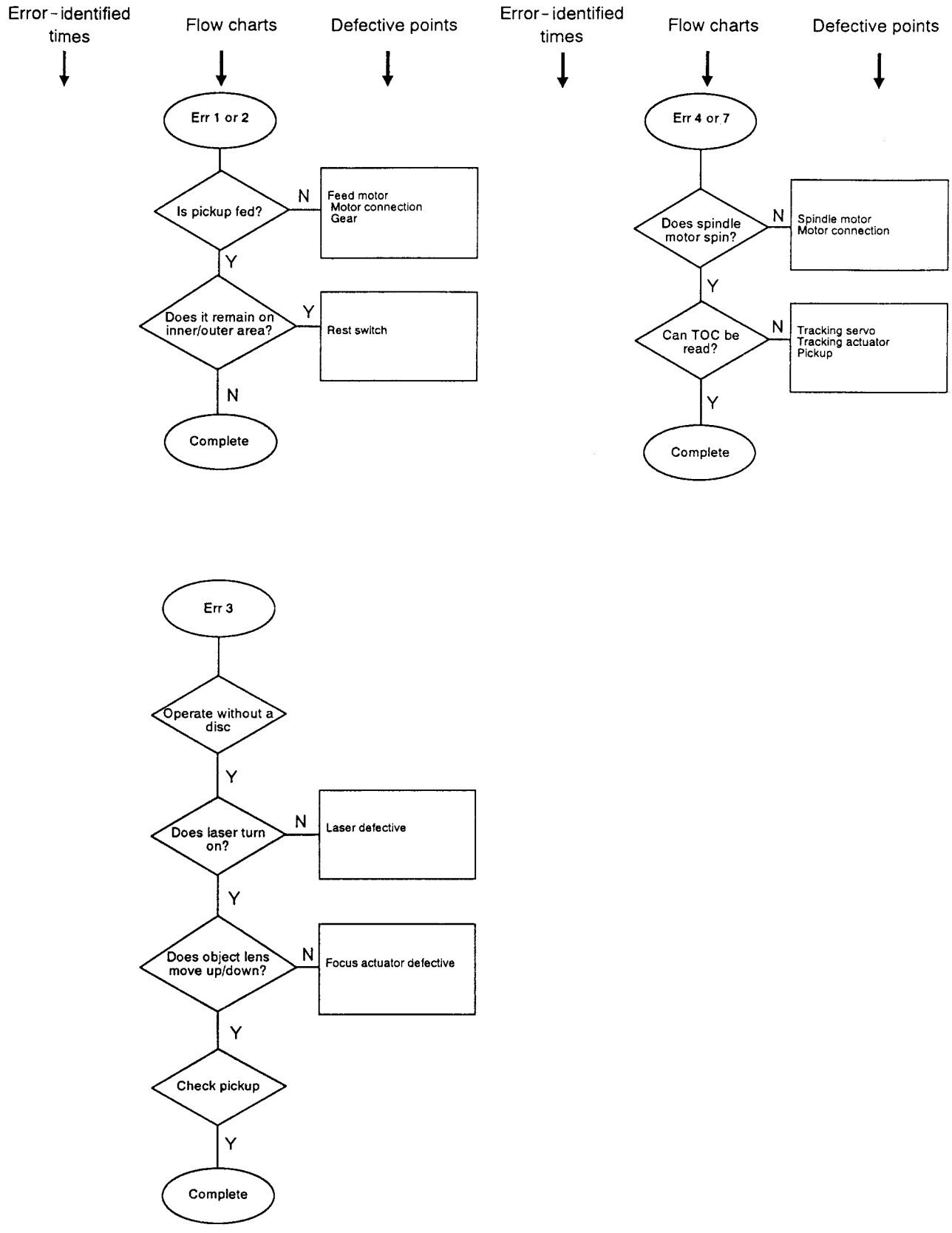
[1] **Press the three [PLAY MODE], [STOP] and [POWER] buttons on the unit set to enter the Test mode. (Then the** illuminating portions of the LCD all light up together. This indicates that the system has entered the Test mode.)

[2] Play a CD. If the operation is defective in any way, an error code should appear on the LCD.

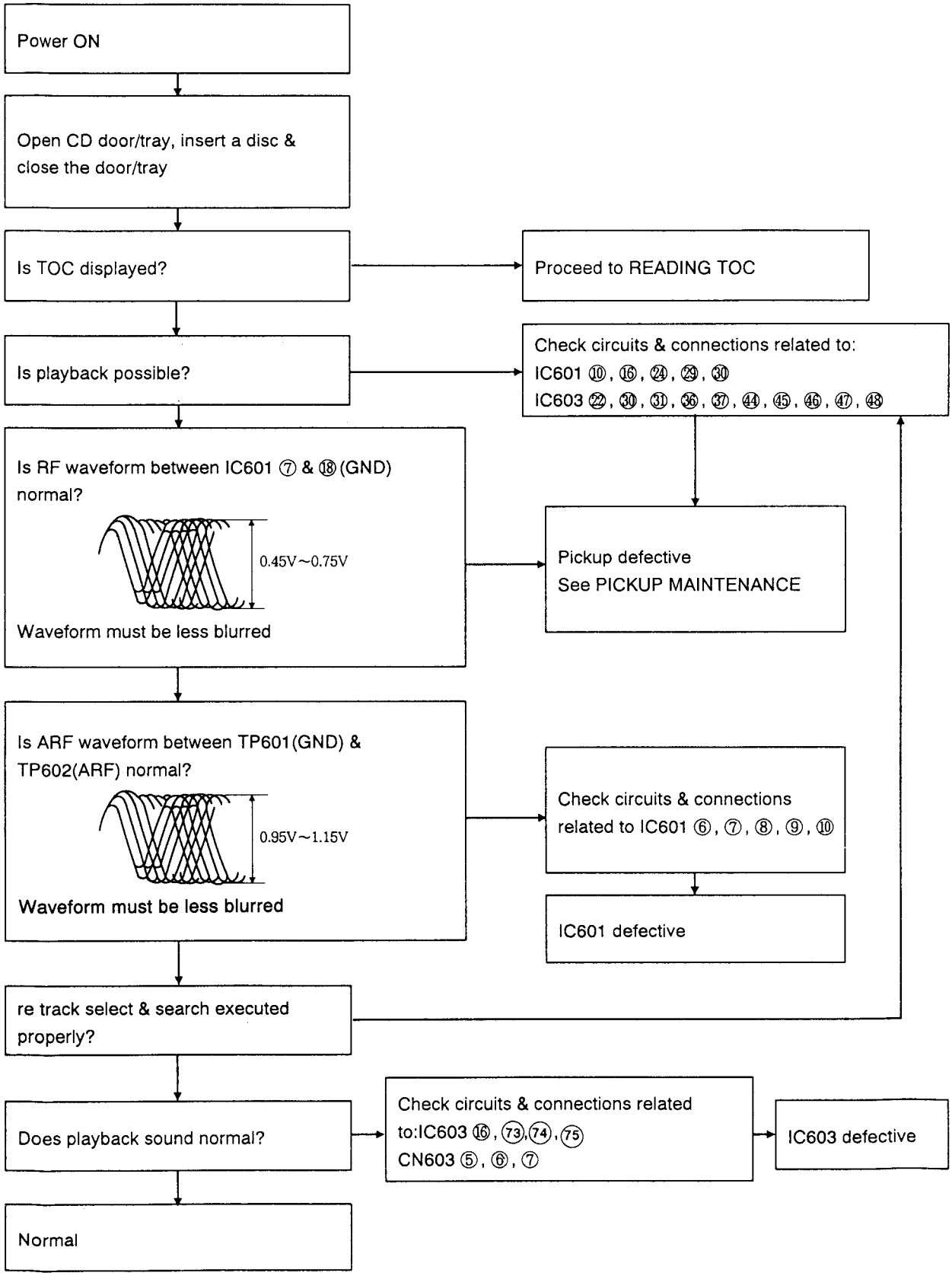
[3] Identify the point of malfunction in accordance with the error code displayed.

2. Error codes & defective points




Error - identified times
Flow charts
Defective points
Err 1 or 2
Is pickup fed?
N
Feed motor
Motor connection
Gear
Y
Does it remain on inner/outer area?
Y
Rest switch
N
Complete
Error - identified times
Flow charts
Defective points
Err 4 or 7
Does spindle motor spin?
N
Spindle motor
Motor connection
Y
Can TOC be read?
N
Tracking servo
Tracking actuator
Pickup
Y
Complete
Err 3
Operate without a disc
Y
Does laser turn on?
N
Laser defective
Y
Does object lens move up/down?
N
Focus actuator defective
Y
Check pickup
Y
Complete

◆ General


Power ON
Open CD door/tray, insert a disc & close the door/tray
Is TOC displayed?
Proceed to READING TOC
Is playback possible?
Check circuits & connections related to:
IC601 ⑩, ⑯, ㉔, ㉙, ㉚
IC603 ㉒, ㉚, ㉛, ㊱, ㊲, ㊹, ㊺, ㊻, ㊼, ㊽
Is RF waveform between IC601 ⑦ & ⑱ (GND) normal?
0.45V~0.75V
Waveform must be less blurred
Pickup defective
See PICKUP MAINTENANCE
Is ARF waveform between TP601(GND) & TP602(ARF) normal?
0.95V~1.15V
Waveform must be less blurred
Check circuits & connections related to IC601 ⑥, ⑦, ⑧, ⑨, ⑩
IC601 defective
re track select & search executed properly?
Does playback sound normal?
Check circuits & connections related to:IC603 ⑯, ⑦③, ⑦④, ⑦⑤
CN603 ⑤, ⑥, ⑦
IC603 defective
Normal

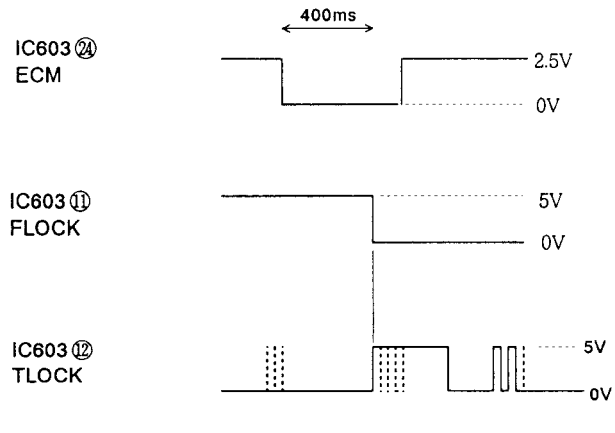
◆ Reading TOC

After opening & closing CD door/tray again with a disc inserted, does the disc spin?

N → Proceed to FOCUS SEARCH

Y

Just after opening & closing CD door/tray again, do the waveforms shown below appear?



N

Y

Check circuits & connections related to:
IC601 ⑥, ⑦, ⑧, ⑩
IC603 ㉕, ㊹, ㊺, ㊻, ㊼, ㊽
CN604 ⑨, ⑩

OK

If IC603 ⑪ waveform is abnormal
Check circuits & connections related to:
CN601 ④, ⑤, ⑥, ⑦, ⑬, ⑯
IC601 ㉗, ㉘, ㉟, ㊱
If IC603 ⑫ waveform is abnormal
Check circuits & connections related to:
CN601 ③, ⑧, ⑭, ⑮
IC601 ㉕, ㉖, ㉝, ㉞
IC603 ㉗, ㉝
IC602 ㉔, ㉖, ㉗

OK

Pickup defective
See PICKUP MAINTENANCE

◆ Focus search

Just after opening & closing CD door/tray again with a disc removed, does the pickup feed to the inner area?

N → Proceed to PICKUP FEED TO INNER AREA

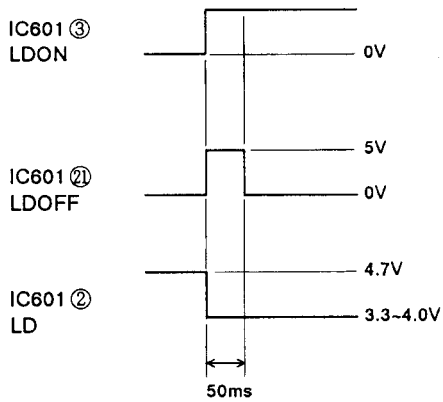
Y

Does lens move up & down?

N

Y

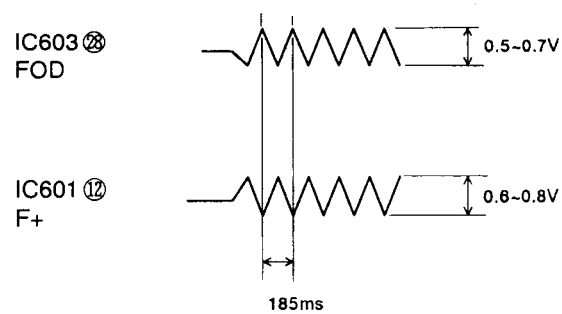
Just after opening & closing CD door/tray again, do the waveforms shown below appear?



Y

Proceed to SPINDLE

Just after opening & closing CD door/tray again, do the waveforms shown below appear?



Y

Check CN601 ⑬ & ⑯ connections

OK

Pickup defective
See PICKUP MAINTENANCE

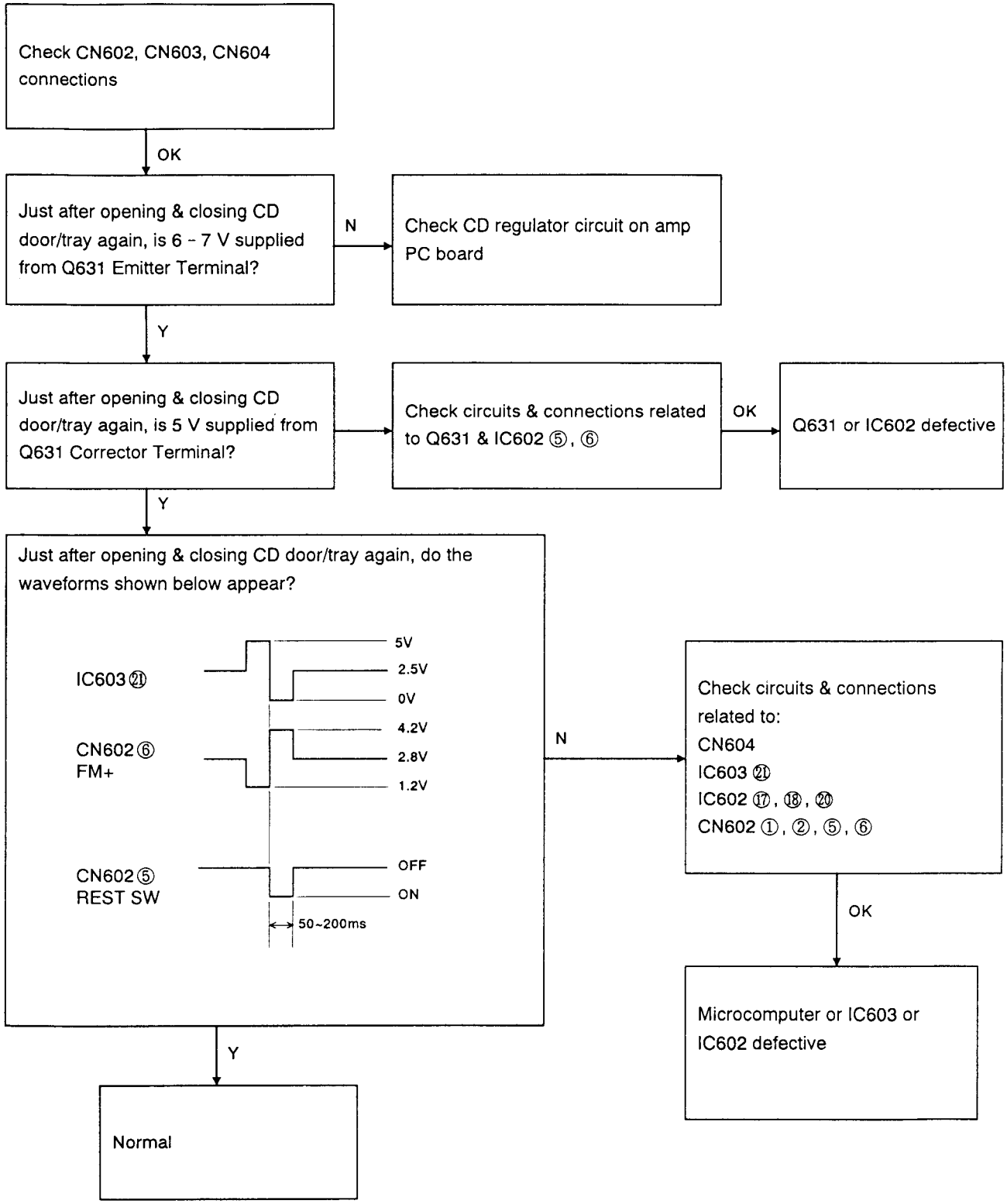
N

Check circuits & connections related to IC603 ㉘ & IC602 ④

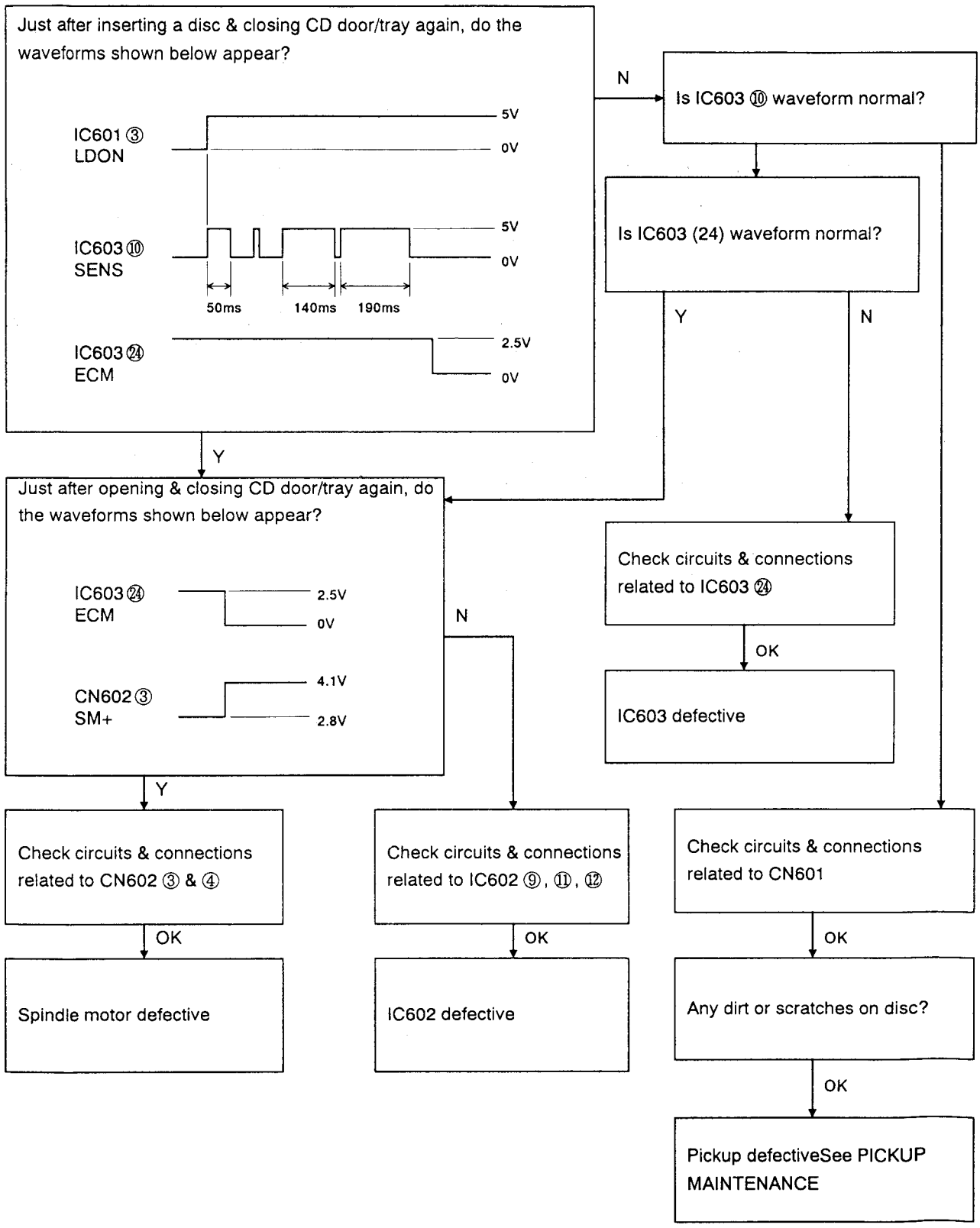
OK

IC602 or IC603 defective

◆ Pickup feed to inner area



◆ Spindle


Just after inserting a disc & closing CD door/tray again, do the waveforms shown below appear?
IC601 ③ LDON
5V
0V
IC603 ⑩ SENS
5V
0V
50ms
140ms
190ms
IC603 ㉔ ECM
2.5V
0V
N
Is IC603 ⑩ waveform normal?
Is IC603 (24) waveform normal?
Y
N
Y
Just after opening & closing CD door/tray again, do the waveforms shown below appear?
IC603 ㉔ ECM
2.5V
0V
CN602 ③ SM+
4.1V
2.8V
N
Check circuits & connections related to IC603 ㉔
OK
IC603 defective
Y
Check circuits & connections related to CN602 ③ & ④
OK
Spindle motor defective
Check circuits & connections related to IC602 ⑨, ⑪, ⑫
OK
IC602 defective
Check circuits & connections related to CN601
OK
Any dirt or scratches on disc?
OK
Pickup defectiveSee PICKUP MAINTENANCE

■ Description of Error Display/Indication

In addition to the normal functions, the service test modes have been incorporated in this model for confirmation and adjustment as described below:

1. Setting of the Service Test Mode

◆ Setting Method

After the power supply has been turned on, it is possible to set this model to the service test mode from the normal function conditions:

When the three [POWER], [PLAY MODE] and [STOP] buttons on the are pressed at the same time, this model will be set to the test mode. When this model has been set to the test mode, all of the LCDs will be turned on.

◆ Release of setting

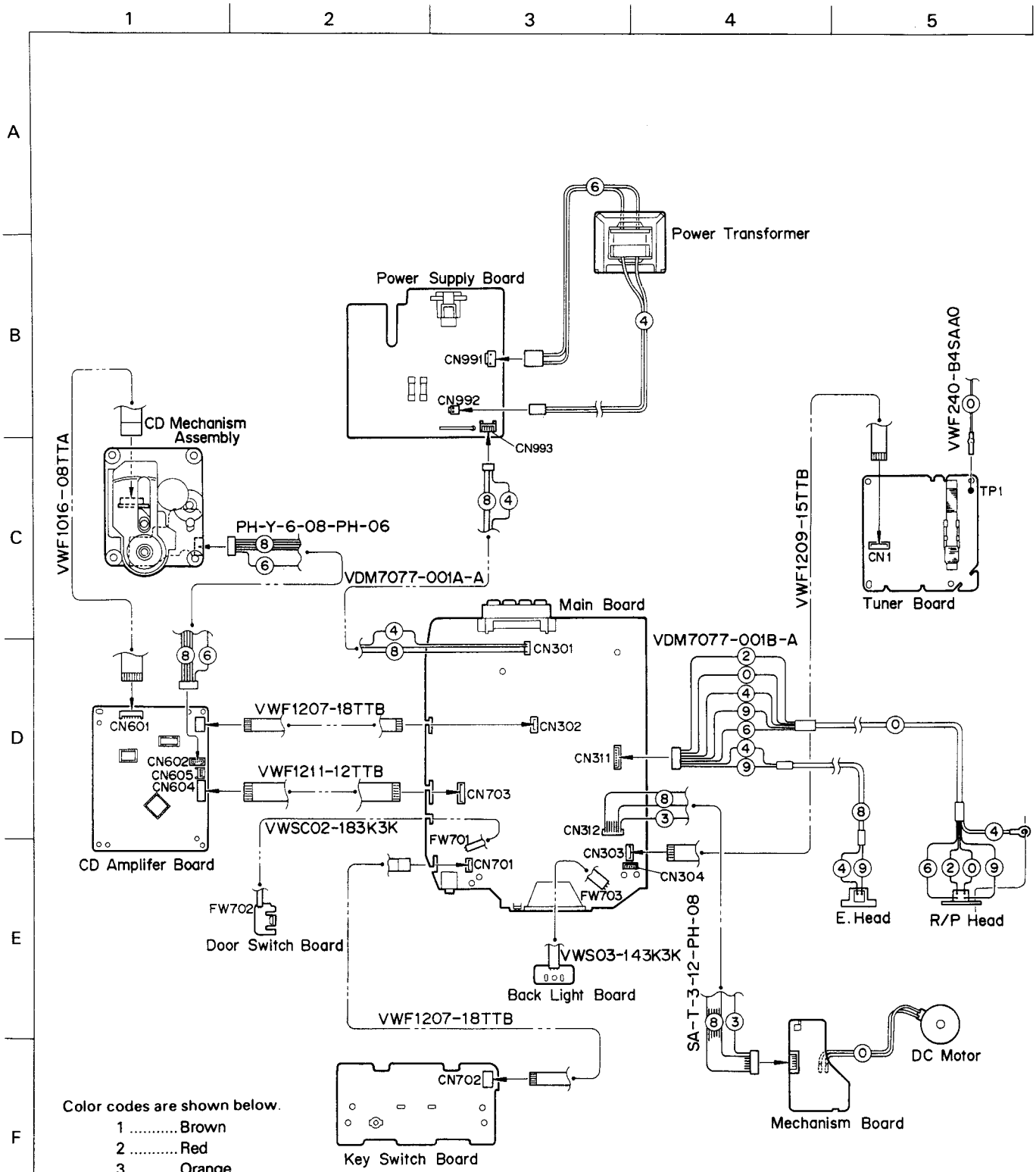
When this model has been set to the test mode, press the three [POWER], [PLAY MODE] and [STOP] buttons at the same time, set this model to the backup mode or reset this model. Then, the test mode will be released.

2. Self-Diagnosis Function of CD Servo

When any error has occurred, either of the following error codes will be displayed depending on the contents of the error:

1) Err 1: Failure to turn on the reset switch (Internal peripheral feeding time-out)
2) Err 2: Failure to turn off the reset switch (Outer peripheral feeding time-out)
3) Err 3: Focusing failure
4) Err 4: TOC reading failure
5) Err 5: Failure to read the Q code continuously for 3 seconds
6) Err 6: Failure to locate the beginning of music when selecting a music
7) Err7: Spindle servo failure

5 Wireing Connections



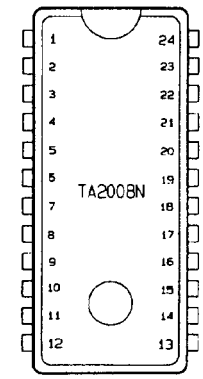
Color codes are shown below.

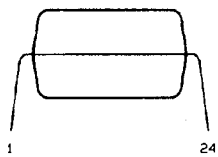
1 ..... Brown
2 ..... Red
3 ..... Orange
4 ..... Yellow
5 ..... Green
6 ..... Blue
7 ..... Violet
8 ..... Grey
9 ..... White
0 ..... Black
D ..... Pink

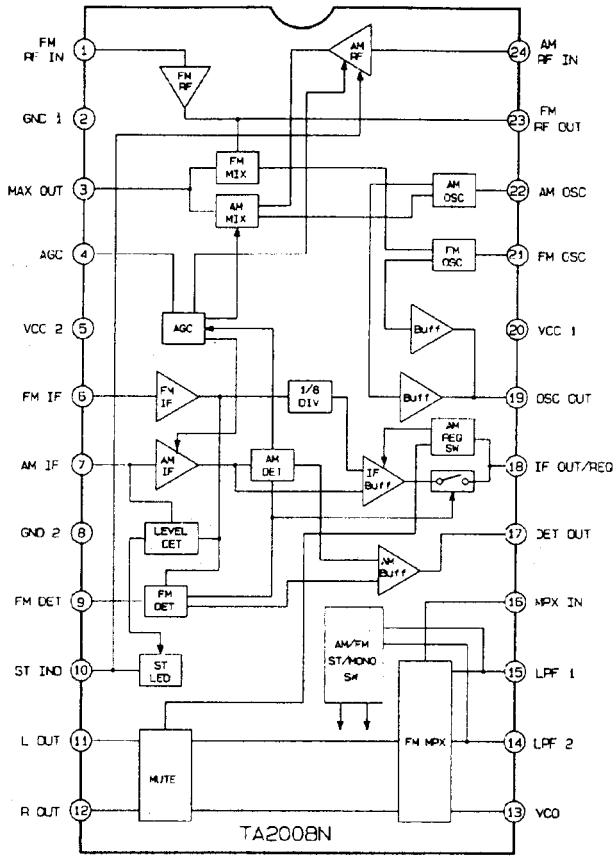
Fig. 5-1

6 Block diagram

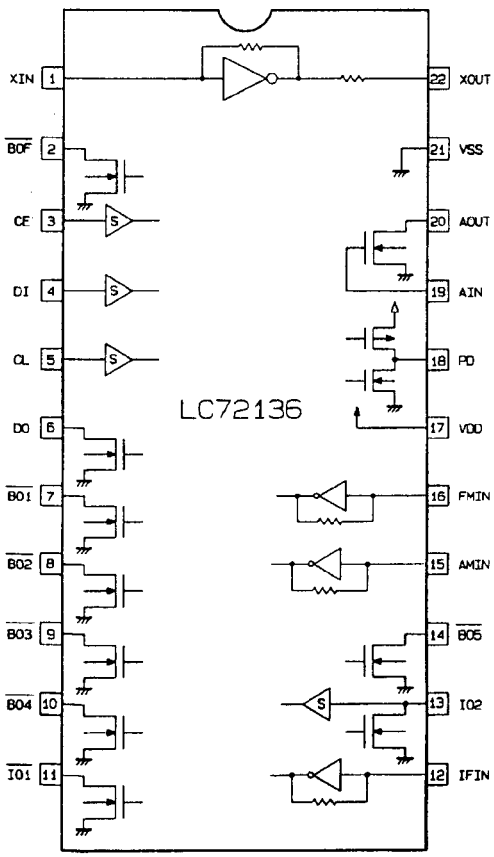
◆ IC2 (TA2008AN)

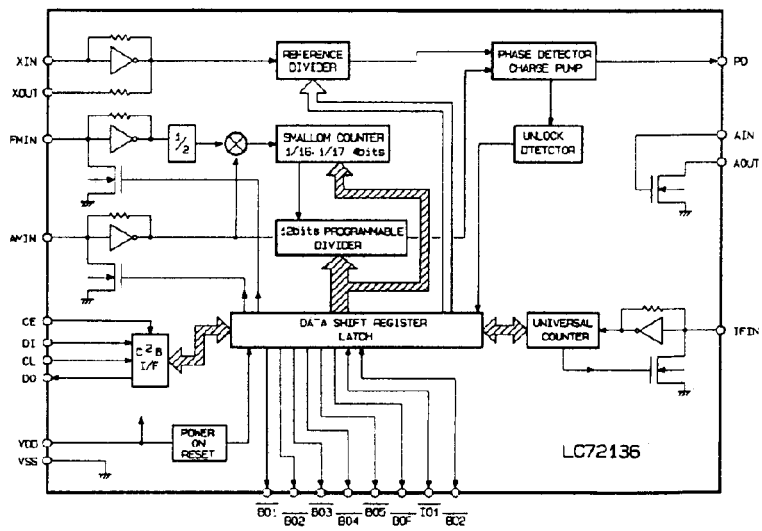




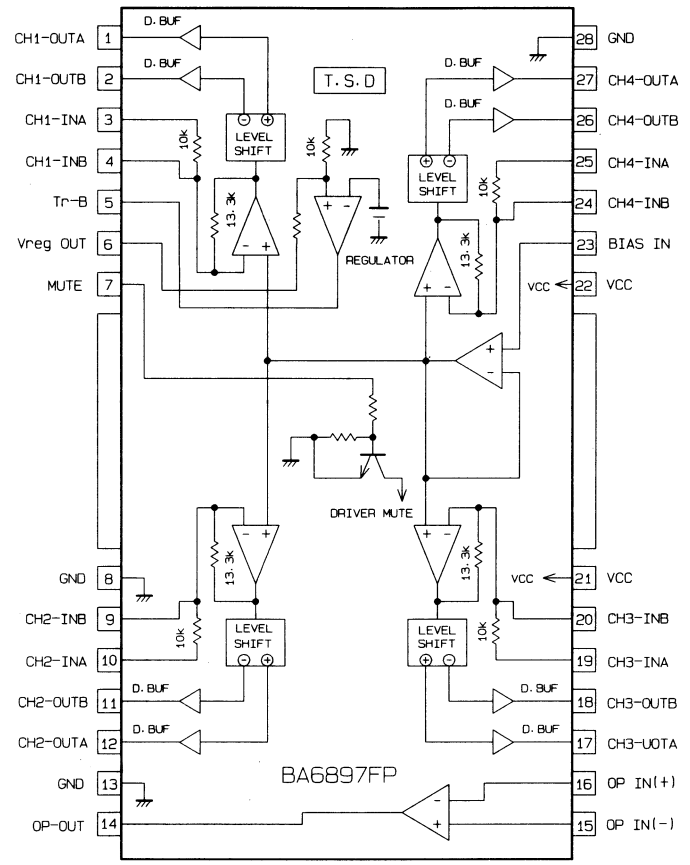


◆ IC3 (LC72136N) PAL

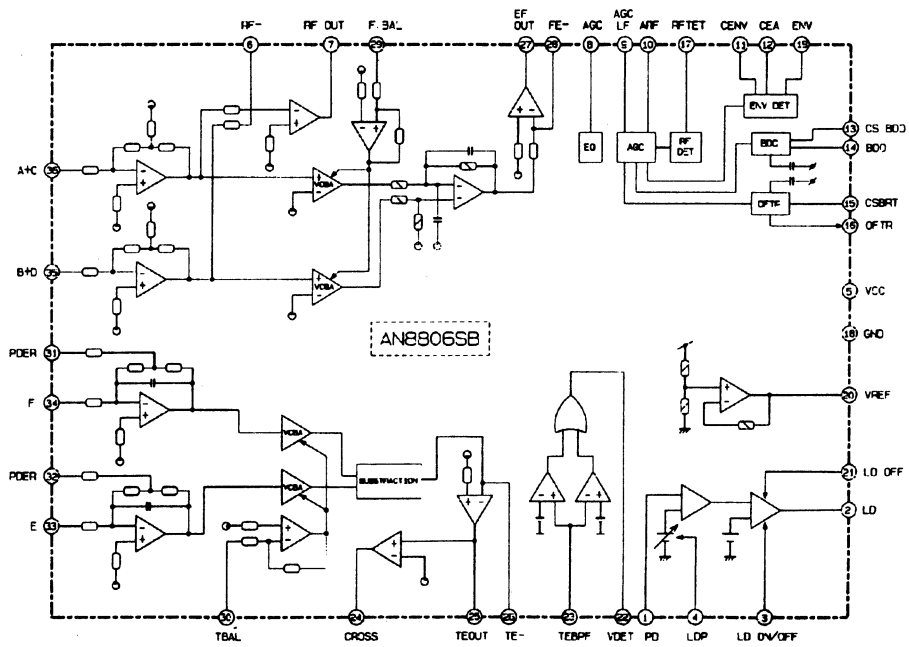




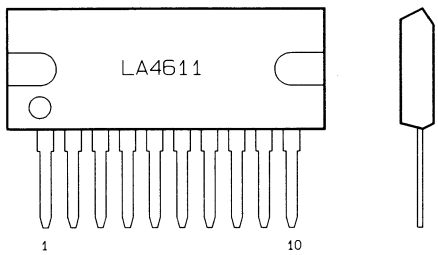
◆ IC301 (LA4611) POWER Amp.

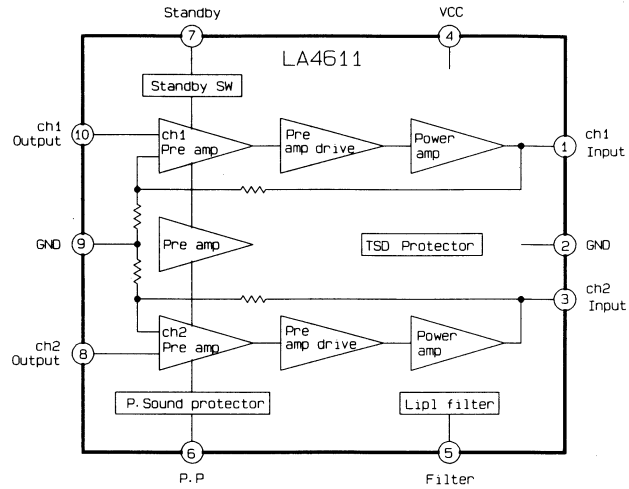


◆ IC601 (AN8806SB) RF & SERVO

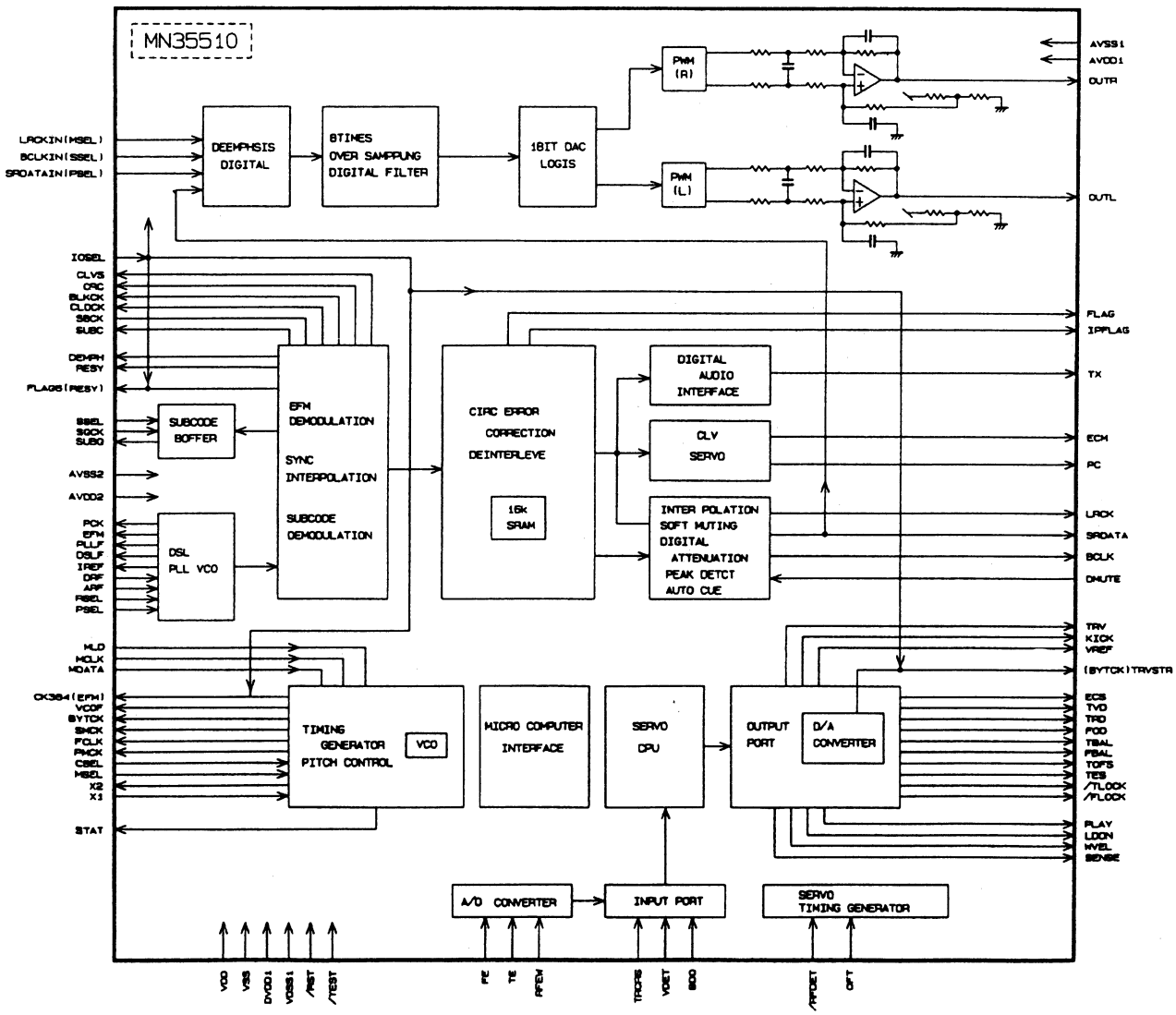


◆ IC602 (BA6897FP) BTL DRIVER





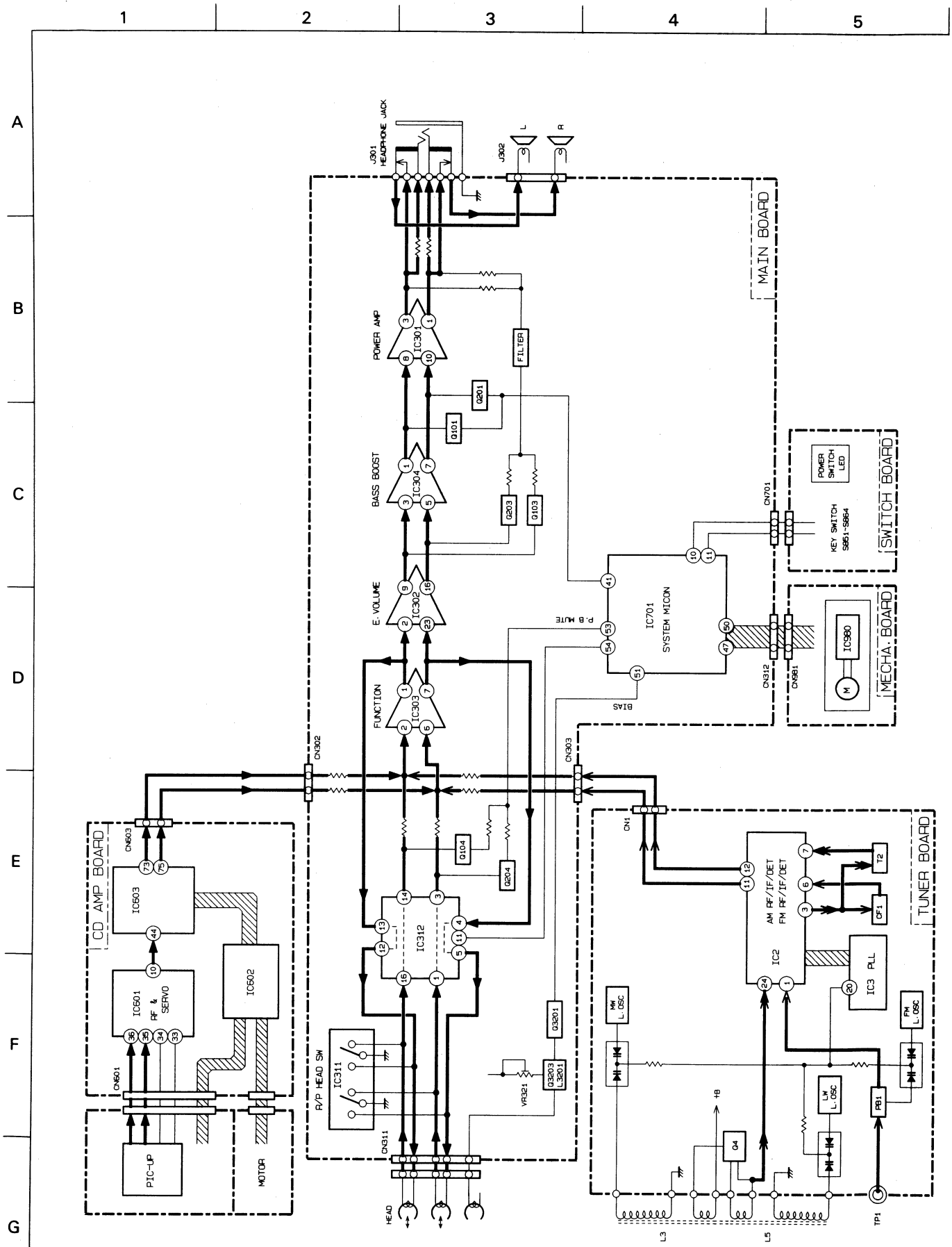
◆ IC603 (MN35510) DIGITAL SERVO



■ IC701 (MN171603J8X) System microprocessor pin function

No	NAME	I/O	Discriptions	No	NAME	I/O	Discriptions
1	$\overline{\text{REST}}$	I	REST SW	43	$\overline{\text{TUST}}$	O	TUNER STROVE
2	NC	I	–	44	$\overline{\text{MPX}}$	O	TUNER STEREO
3	AVSS	–	A.GND	45	NC		–
4	VER	I	VERSION DETECT	46	$\overline{\text{REC}}$		REC DETECT
5	SAFETY		SW8V SAFETY DETECT	47	REEL PALS		REEL PALS
6	CD+B		CD+B SAFETY DETECT	48	FAST	O	FAST
7	$\overline{\text{CLOSE}}$		CD DOOR DETECT	49	F/R		FWD/REW CONTROL
8	NC	I	–	50	M ON		MOTOR SW
9	BUP		BUCK UP DETECT	51	RECB		RECB
10	KEY1		KEY1	52	R/P	O	REC/PLAY CONTROL
11	KEY2		KEY2	53	PBMUTE		PBMUTE
12	AVDD	–	AVDD	54	RECMUTE		RECMUTE
13	VLC1	–	LCD BIAS(VDD>VLCD1>VLCD2>VLCD3 >VSS)	55	$\overline{\text{+BCTL}}$		+B CONTROL
14	VLC2	–		56	$\overline{\text{F.CD}}$	O	FUNCTION CD
15	VLC3	–		57	F.TU		FUNCTION TUNER
16	COM3	O	LCD COMMON	58	VOL		VOLUME (PWM)
17	COM2	O	"	59	BASS		BASS (PWM)
18	COM1	O	"	60	TRE	O	TREBLE (PWM)
19	COM0	O	"	61	MLD		MICON COMMAND LOAD
20	SEG0	O	LCD SEGMENT	62	$\overline{\text{XRST}}$		CD LSI RESET
21	SEG1	O	"	63	BEAT2		BEAT2
22	SEG2	O	"	64	$\overline{\text{AC/DC}}$	I	AC/DC DETECT
23	SEG3	O	"	65	NC		–
24	SEG4	O	"	66	STAT		STATUS
25	SEG5	O	"	67	NC		–
26	SEG6	O	"	68	RESET	I	RESET
27	SEG7	O	"	69	NC	I	–
28	SEG8	O	"	70	NC	O	–
29	SEG9	O	"	71	VSS	–	D.GND
30	SEG10	O	"	72	OSC2	O	OSC2
31	SEG11	O	"	73	OSC1	I	OSC1
32	SEG12	O	"	74	VDD	–	VDD
33	SEG13	O	"	75	BEAT1	O	BEAT1
34	SEG14	O	"	76	SQCK	O	SUBCODE Q CLOCK
35	SEG15	O	"	77	SUBQ	I	SUBCODE Q DATA
36	SEG16	O	"	78	MCLK	O	MICON COMMAND CLOCK
37	SEG17		"	79	MDATA	O	MICON COMMAND DATA
38	SEG18		"	80	SCK	O	SERIAL CLOCK
39	NC			81	S1	I	SERIAL DATA IN
40	POUT	O	POWER CONTROL	82	S0	O	SERIAL DATA OUT
41	$\overline{\text{SMUTE}}$		SYSTEM MUTE	83	$\overline{\text{PIN}}$	I	POWER KEY
42	AHB		ACTIVE HYPER BASS	84	REM	I	REMOCON IN

■ Signal diagram



7 Standard schematic diagram ■ Tuner circuit

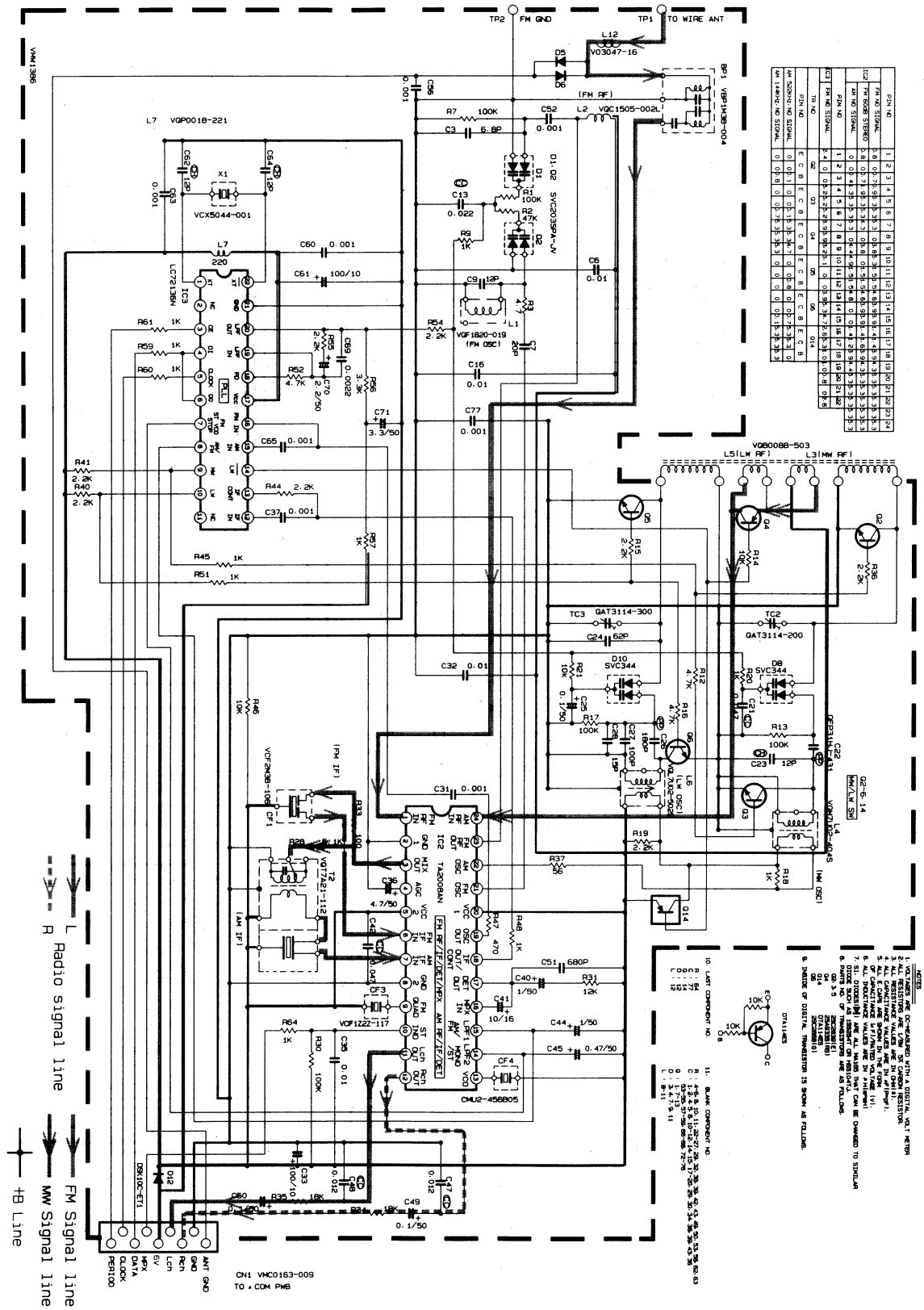
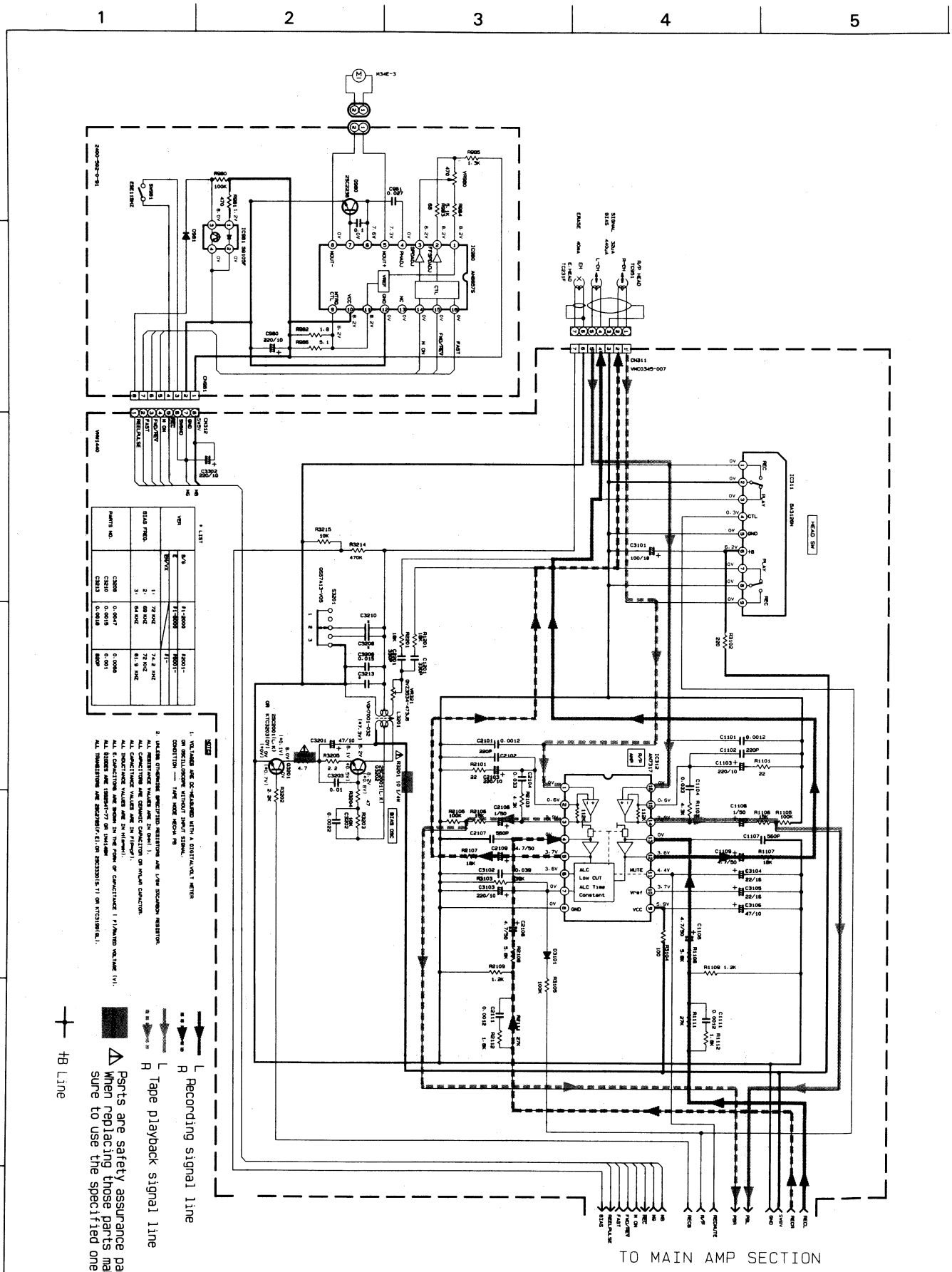


Fig. 7-1

Note
VDH9035005TW

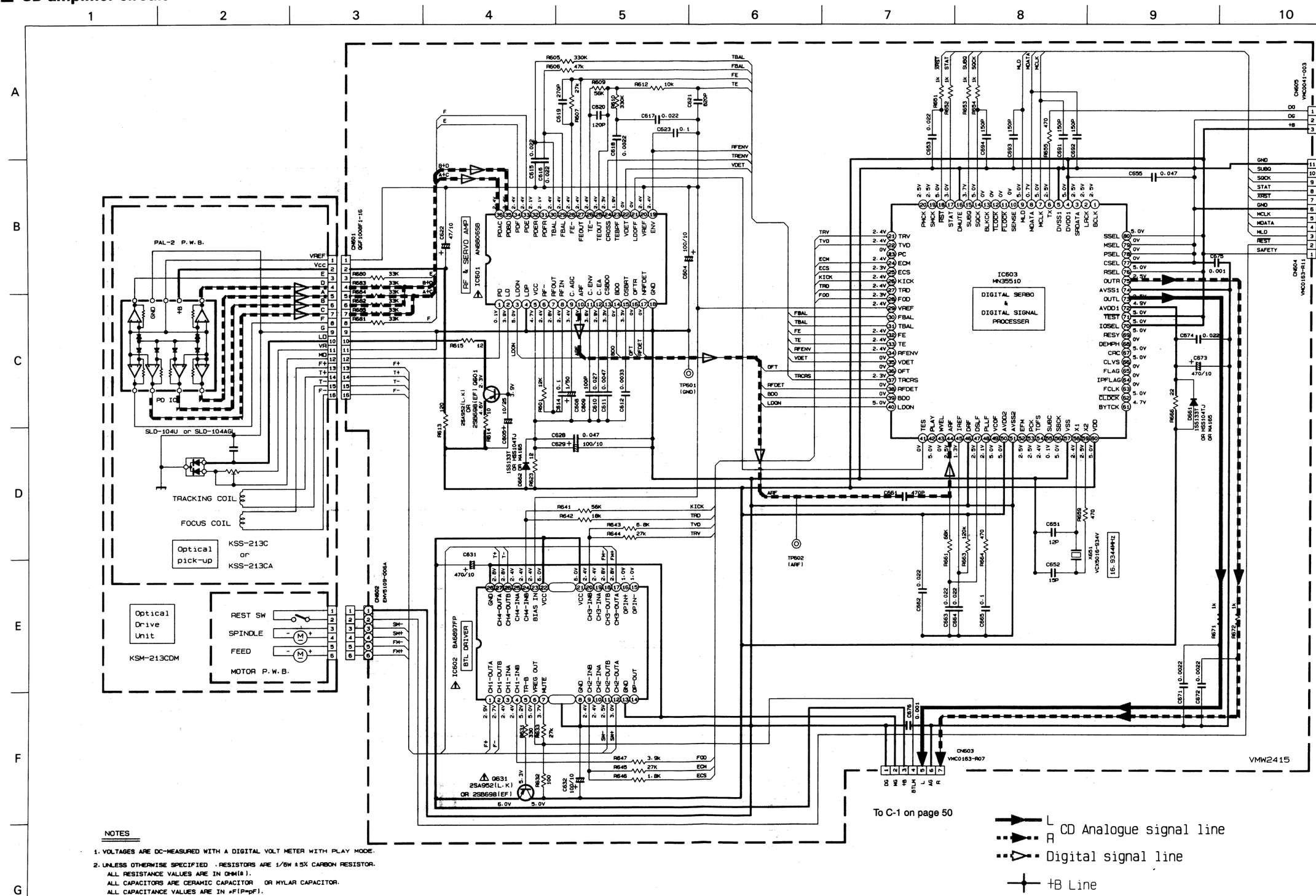
■ Cassette amplifier circuit



Note
VDH9035005RW

Fig. 7-2

■ CD amplifier circuit



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITH PLAY MODE.
2. UNLESS OTHERWISE SPECIFIED · RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).

Fig. 7-3

Note
VDH1035001CW

■ Power amplifier circuit

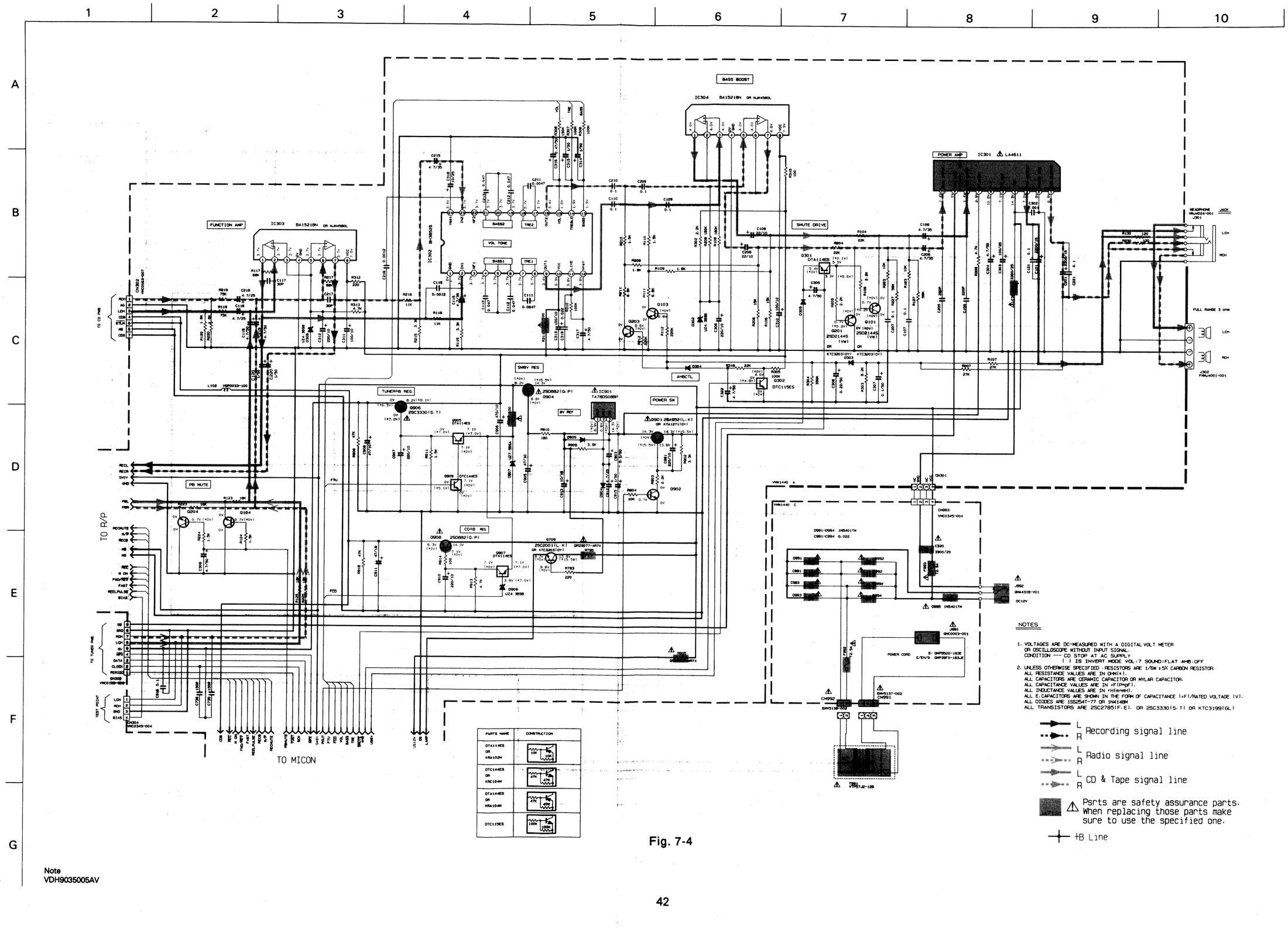
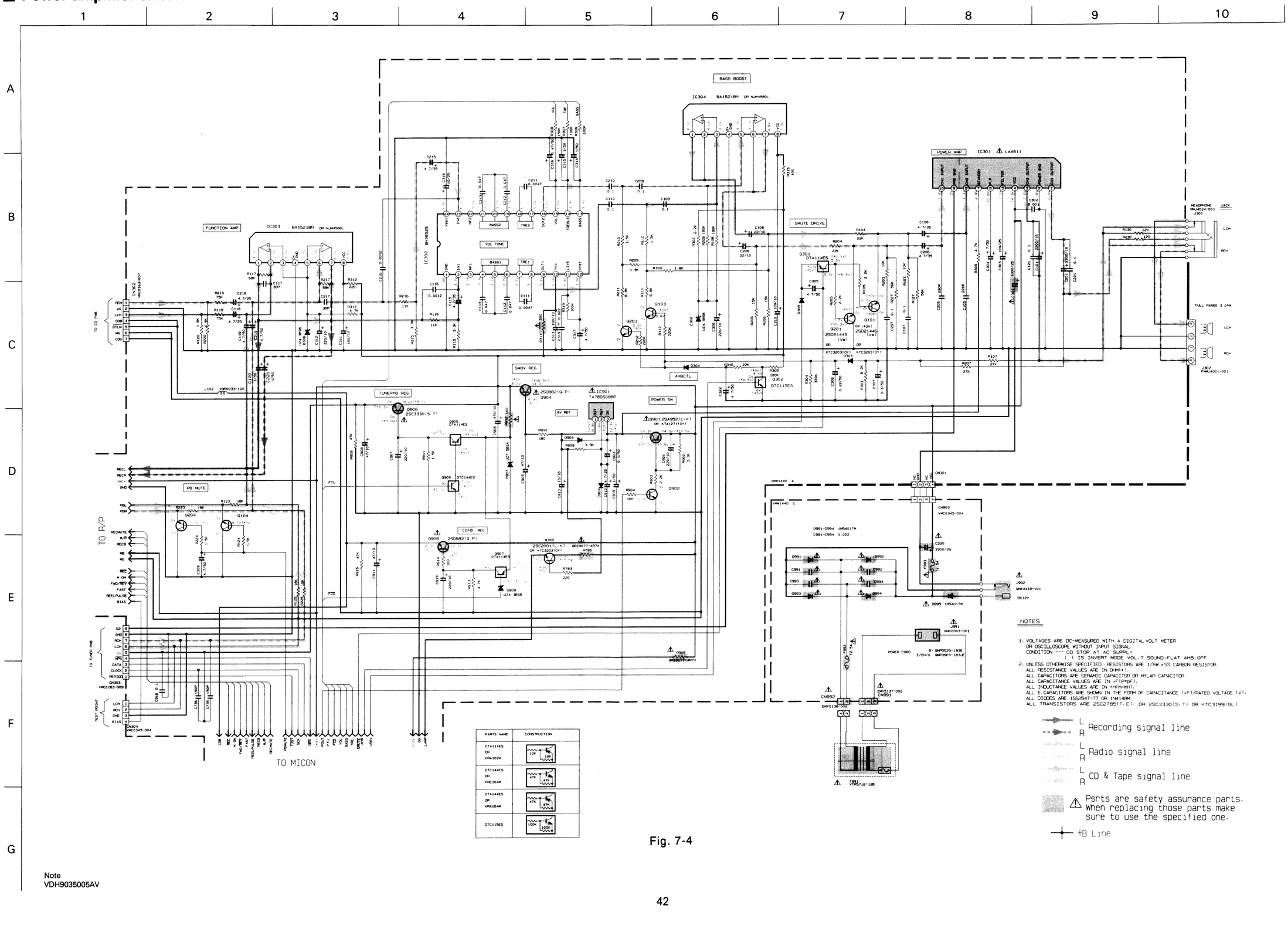


Fig. 7-4

Note
VDH9035005AV

■ Power amplifier circuit



NOTES

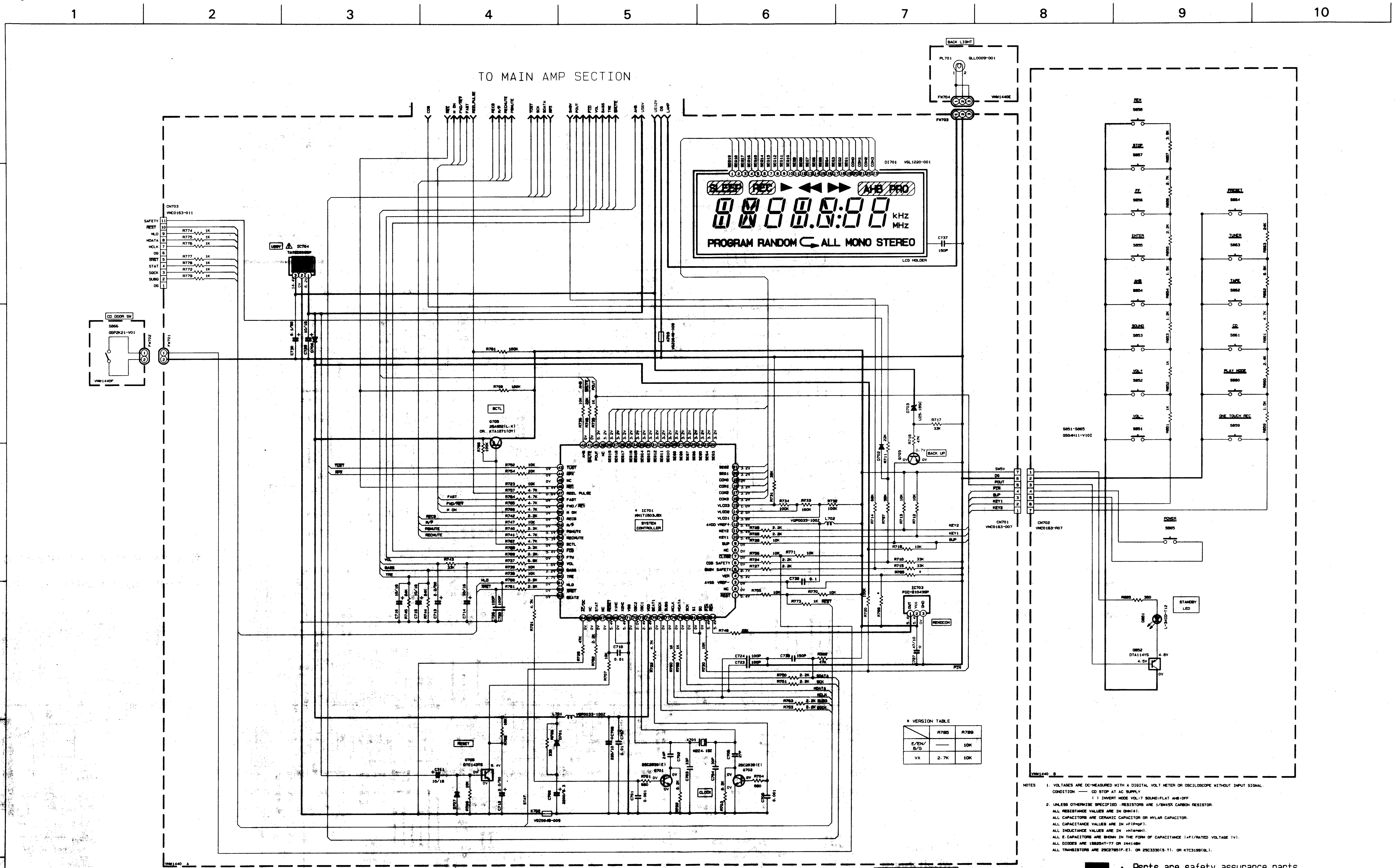
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION ---- CD STOP AT AC SUPPLY
   ( ) IS INVERT MODE VOL:7 SOUND:FLAT AHB:OFF
2. UNLESS OTHERWISE SPECIFIED: RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(PpF).
   ALL INDUCTANCE VALUES ARE IN μH(mH).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS254T-77 OR 1N4148M
   ALL TRANSISTORS ARE 2SC2705(F.E). OR 2SC3330(S.T) OR KTC3199(GL)

PARTS NAME	CONSTRUCTION
DTA114ES OR KRA102M	10K / 10K
DTC144ES OR KRC104M	47K / 47K
DTA144ES OR KRA104M	47K / 47K
DTC115ES	100K / 100K

Fig. 7-4

Note
VDH9035005AV

■ System control circuit



* IC701

	MN171603JBX	MN171603JBX1
E	#1-3000	#3001-
EN	-	#1-
B/G	#1-2000	#2001-
VX	-	#1-

* VERSION TABLE

	R785	R789
E/EN/B/G	—	10K
VX	2.7K	10K

PARTS NAME	CONSTRUCTION
DTC143TS OR KRC110M	4.7K
DTA114YS OR KRA107M	10K, 47K

NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILOSCOPE WITHOUT INPUT SIGNAL.
CONDITION —— CD STOP AT AC SUPPLY
( ) INVERT MODE VOL:7 SOUND:FLAT AHB:OFF
2. UNLESS OTHERWISE SPECIFIED. RESISTORS ARE 1/6W±5% CARBON RESISTOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
ALL CAPACITANCE VALUES ARE IN μF(P=pF).
ALL INDUCTANCE VALUES ARE IN μH(m=mH).
ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
ALL DIODES ARE 1SS254T-77 OR 1N4148M
ALL TRANSISTORS ARE 2SC2785(F.E). OR 2SC3330(S.T). OR KTC3199(GL).

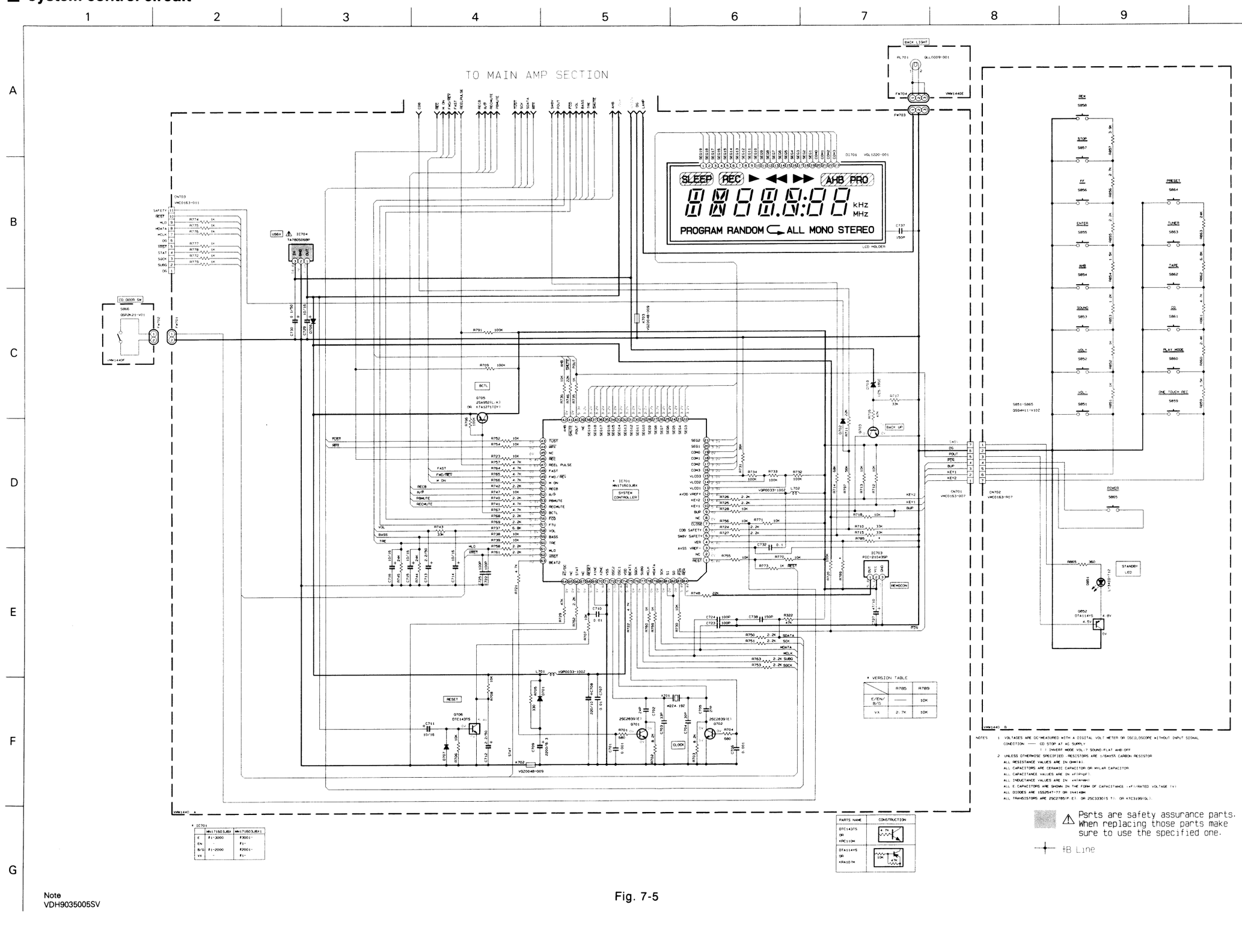
■ ⚠ Psrts are safety assurance parts. When replacing those parts make sure to use the specified one.

+B Line

Fig. 7-5

Note
VDH9035005SV

■ System control circuit



Note
VDH9035005SV

Fig. 7-5

8 Location of P. C. board and Parts list ■ Main board

◆ Key switch board

◆ Main Amp. board

◆ Power supply board

◆ Battery board

CD door switch board

Fig. 8-1

■ Cassette mechanism board

• This board parts is non sirvice

Fig. 8-2

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 101	QETB1CM-228M	E.CAPACITOR	2200MF 20% 16V	
	C 105	QCBB1HK-221Y	C.CAPACITOR	220PF 10% 50V	
	C 106	VCE131V-475Z	E CAPACITOR	USE ONLY AZM	
	C 107	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 108	QTE1A03-226Z	E CAPACITOR		
	C 109	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 110	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 111	QFN41HJ-472	M.CAPACITOR	4700PF 5% 50V	
	C 112	QFN41HJ-473	M.CAPACITOR	.047MF 5% 50V	
	C 113	QFN41HJ-473	M.CAPACITOR	.047MF 5% 50V	
	C 115	VCE131V-475Z	E CAPACITOR	FOR SOUND	
	C 116	QFN41HJ-122	M.CAPACITOR	1200PF 5% 50V	
	C 117	QCS11HJ-300	C.CAPACITOR	30PF 5% 50V	
	C 118	QTE1E03-475Z	E CAPACITOR		
	C 119	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 120	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 121	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 201	QETB1CM-228M	E.CAPACITOR	2200MF 20% 16V	
	C 205	QCBB1HK-221Y	C.CAPACITOR	220PF 10% 50V	
	C 206	VCE131V-475Z	E CAPACITOR	USE ONLY AZM	
	C 207	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 208	QTE1A03-226Z	E CAPACITOR		
	C 209	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 210	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 211	QFN41HJ-472	M.CAPACITOR	4700PF 5% 50V	
	C 212	QFN41HJ-473	M.CAPACITOR	.047MF 5% 50V	
	C 213	QFN41HJ-473	M.CAPACITOR	.047MF 5% 50V	
	C 215	VCE131V-475Z	E CAPACITOR	FOR SOUND	
	C 216	QFN41HJ-122	M.CAPACITOR	1200PF 5% 50V	
	C 217	QCS11HJ-300	C.CAPACITOR	30PF 5% 50V	
	C 218	QTE1E03-475Z	E CAPACITOR		
	C 219	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 220	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 221	QFV41HJ-104ZM	FILM CAPACITOR	.10MF 5% 50V	
	C 301	QETM1EM-338	E.CAPACITOR	3300MF 20% 25V	
	C 302	QCBB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
	C 303	QET41EM-107	E CAPACITOR	100MF 20% 25V	
	C 304	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 305	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 306	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C 307	QETC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 308	QETC1HM-224ZM	E CAPACITOR	.22MF 20% 50V	
	C 309	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 310	QET41AM-107	E CAPACITOR	100MF 20% 10V	
	C 311	QET41AM-107	E CAPACITOR	100MF 20% 10V	
	C 312	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C 313	QET41AM-107	E CAPACITOR	100MF 20% 10V	
	C 314	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 315	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 316	QET41HM-474	E CAPACITOR	.47MF 20% 50V	
	C 317	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C 318	QET41EM-106	E CAPACITOR	10MF 20% 25V	
	C 319	QFN81HJ-223	M.CAPACITOR	.022MF 5% 50V	
	C 320	QETM1EM-338	E.CAPACITOR	BACK LIGHT	
	C 322	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 701	QCBB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
	C 702	QCS11HJ-240	C.CAPACITOR	24PF 5% 50V	
	C 703	QCS11HJ-330	C.CAPACITOR	33PF 5% 50V	
	C 704	QCS11HJ-300	C.CAPACITOR	30PF 5% 50V	
	C 705	QCS31HJ-270Z	C.CAPACITOR	27PF 5% 50V	
	C 706	QCBB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
	C 707	QCVB1CN-103Y	C.CAPACITOR	.010MF 30% 16V	
	C 708	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C 709	QETBOJM-228JB	E CAPACITOR	2200MF 20% 6.3V	
	C 710	QCVB1CN-103Y	C.CAPACITOR	.010MF 30% 16V	
	C 711	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 712	QETC1HM-225ZM	E CAPACITOR	2.2MF 20% 50V	
	C 713	QETC1HM-225ZM	E CAPACITOR	2.2MF 20% 50V	
	C 714	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 715	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 716	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 722	QCBB1HK-101Y	C.CAPACITOR	100PF 10% 50V	
	C 723	QCBB1HK-101Y	C.CAPACITOR	100PF 10% 50V	
	C 724	QCBB1HK-101Y	C.CAPACITOR	100PF 10% 50V	
	C 725	QCBB1HK-101Y	C.CAPACITOR	100PF 10% 50V	
	C 727	QET41AM-476	E CAPACITOR	REMOCON	
	C 729	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 730	QETC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 732	QFN41HJ-104	M.CAPACITOR	.10MF 5% 50V	
	C 735	QCBB1HK-151Y	C.CAPACITOR	150PF 10% 50V	
	C 736	QCBB1HK-151Y	C.CAPACITOR	150PF 10% 50V	
	C 737	QCBB1HK-151Y	C.CAPACITOR	150PF 10% 50V	
	C 738	QCBB1HK-151Y	C.CAPACITOR	150PF 10% 50V	
	C 901	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C 903	QETC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 905	QET41AM-476	E CAPACITOR	47MF 20% 10V	
	C 906	QET41AM-477	E CAPACITOR	470MF 20% 10V	
	C 907	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C 908	QET41AM-476	E CAPACITOR	47MF 20% 10V	
	C 910	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C 911	QET41AM-476	E CAPACITOR	47MF 20% 10V	
	C 912	QET41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 913	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 915	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 916	QCFB1HZ-104Y	C.CAPACITOR	UCON NOISE	
	C 991	QCF11HP-223	C.CAPACITOR	.022MF +100:-0%	
	C 992	QCF11HP-223	C.CAPACITOR	.022MF +100:-0%	
	C 993	QCF11HP-223	C.CAPACITOR	.022MF +100:-0%	
	C 994	QCF11HP-223	C.CAPACITOR	.022MF +100:-0%	
	CLIP	VMZ0125-001Z	FUSE CLIP		
	CLIP	VMZ0125-001Z	FUSE CLIP		
	CN302	VMC0163-007	CONNECTOR	AMP(TO CD)	
	CN303	VMC0163-009	CONNECTOR	AMP(TO TUNER)	
	CN304	VMC0345-004	CONNECTOR	TEST POINT	
	CN311	VMC0345-007	CONNECTOR	AMP(TO RP HEAD)	
	CN701	VMC0163-007	CONNECTOR	UCON(TO KEY)	
	CN702	VMC0163-R07	CONNECTOR	KEY (TO MAIN)	
	CN703	VMC0163-011	CONNECTOR	UCOM(TO CD)	
⚠	CN991	EMV5137-002	CONNECTOR	SAME AS VMZ0049	
⚠	CN992	EMV5138-002	CONNECTOR	SAME AS VMZ0049	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN993	VMC0345-004	CONNECTOR	REG (/MAIN)	
	C1101	QCXB1CM-122Y	C.CAPACITOR	1200PF 20% 16V	
	C1102	QCBB1HK-221Y	C.CAPACITOR	220PF 10% 50V	
	C1103	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C1104	QFN41HJ-333	M.CAPACITOR	.033MF 5% 50V	
	C1106	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C1107	QCBB1HK-561Y	C.CAPACITOR	560PF 10% 50V	
	C1108	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C1109	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C1111	QFN41HJ-122	M.CAPACITOR	1200PF 5% 50V	
	C1201	QCBB1HK-331Y	C.CAPACITOR	330PF 10% 50V	
	C2101	QCXB1CM-122Y	C.CAPACITOR	1200PF 20% 16V	
	C2102	QCBB1HK-221Y	C.CAPACITOR	220PF 10% 50V	
	C2103	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C2104	QFN41HJ-333	M.CAPACITOR	.033MF 5% 50V	
	C2106	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C2107	QCBB1HK-561Y	C.CAPACITOR	560PF 10% 50V	
	C2108	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C2109	QET41HM-475	E CAPACITOR	4.7MF 20% 50V	
	C2111	QFN41HJ-122	M.CAPACITOR	1200PF 5% 50V	
	C2201	QCBB1HK-331Y	C.CAPACITOR	330PF 10% 50V	
	C3101	QET41AM-107	E CAPACITOR	100MF 20% 10V	
	C3102	QFN31HJ-393ZN	M.CAPACITOR	.039MF 5% 50V	
	C3103	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	C3104	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C3105	QET41CM-226	E CAPACITOR	22MF 20% 16V	
	C3106	QET41AM-476	E CAPACITOR	47MF 20% 10V	
	C3201	QET41AM-476	E CAPACITOR	47MF 20% 10V	
	C3202	QFN41HJ-222	M.CAPACITOR	2200PF 5% 50V	
	C3203	QFN81HJ-103	M.CAPACITOR	.010MF 5% 50V	
	C3206	QFN41HJ-153	M.CAPACITOR	.015MF 5% 50V	
	C3208	QFN41HJ-472	M.CAPACITOR	4700PF 5% 50V	
	C3210	QFN81HJ-152	M.CAPACITOR	1500PF 5% 50V	
	C3213	QFN41HJ-182	M.CAPACITOR	1800PF 5% 50V	
	C3302	QET41AM-227	E CAPACITOR	220MF 20% 10V	
	D 302	UZ4.3BSB-T2	ZENER DIODE		
	D 303	1SS133	SI DIODE		
	D 304	1SS133	SI DIODE		
	D 305	1SS133	SI DIODE		
	D 306	UZ4.3BSB-T2	ZENER DIODE		
	D 701	1SS133	SI DIODE		
	D 702	1SS133	SI DIODE		
	D 703	UZ5.1BSC-T2	ZENER DIODE		
	D 706	1SS133	SI DIODE		
	D 707	1SS133	SI DIODE		
	D 851	L-34ID-T12	LED	KING BRIGHT	
	D 904	1SS133	SI DIODE		
	D 905	1SS133	SI DIODE		
	D 907	UZ7.5BSA-T2	ZENER DIODE		
	D 909	UZ4.3BSB-T2	ZENER DIODE		
⚠	D 991	1N5401TM	SI DIODE		
⚠	D 992	1N5401TM	SI DIODE		
⚠	D 993	1N5401TM	SI DIODE		
⚠	D 994	1N5401TM	SI DIODE		
⚠	D 995	1N5401TM	SI DIODE	DC JACK	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	DI701	VGL1220-001	LCD	LCD DISPLAY	
	D3101	1SS133	SI DIODE		
⚠	IC301	LA4611	IC	POWER AMP	
	IC302	BH3852S	IC	VOL&TONE	
	IC303	BA15218N	IC	FUNCTION AMP	
	IC304	BA15218N	IC	S.BASS	
⚠	IC304	LA4611	IC	POWER AMP	
	IC311	BA3126N	IC	HEAD SW	
	IC312	AN7317	IC	PB&REC	
	IC701	MN171603J8X1	IC	MICOM 171603	
	IC703	PIC-21043SP	REMOKON SENSOR	REMOCON	
⚠	IC704	TA78DS06BP	IC	US6V	
	IC901	TA78DS08BP	IC		
	J 301	VMJ4024-001	JACK	H.HONES JACK	
	J 302	FMMJ4001-001	SPK TERMINAL	SP TERMINAL	
	J 991	QNC0003-001	AC SOCKET		
⚠	J 992	QMA431B-V01	DC JACK		
	K 701	VQZ0048-009	INDUCTOR		
	K 702	VQZ0048-009	INDUCTOR		
	K 703	VQZ0048-009	INDUCTOR	(B1232 BF)	
	L 102	VQP0033-100Z	INDUCTOR	(=B1029)(-002 I	
	L 701	VQP0033-100Z	INDUCTOR		
	L 702	VQP0033-100Z	INDUCTOR		
	L3201	VQH7001-032	OSC COIL(BIAS)		
	PL701	QLL0009-001	LAMP(BLUE)	LIGHT BLUE	
	Q 101	2SD2144S(VW)	TRANSISTOR	S MUTE	
	Q 103	2SC3330	TRANSISTOR		
	Q 104	2SC3330	TRANSISTOR	PB MUTE	
	Q 201	2SD2144S(VW)	TRANSISTOR	S MUTE	
	Q 203	2SC3330	TRANSISTOR		
	Q 204	2SC3330	TRANSISTOR	PB MUTE	
	Q 301	DTA114ES	TRANSISTOR		
	Q 302	DTC115ES	TRANSISTOR		
	Q 701	2SC2839	TRANSISTER		
	Q 702	2SC2839	TRANSISTER		
	Q 703	2SC3330	TRANSISTOR		
	Q 705	2SA952(L,K)	TRANSISTOR	+BCTL FOR BATT	
	Q 706	DTC143TS	TRANSISTOR		
	Q 709	2SC2001(L,K)	TRANSISTOR	BACK LIGHT	
	Q 852	DTA114YS	TRANSISTOR	STANDBY	
⚠	Q 901	2SA952(L,K)	TRANSISTOR		
	Q 902	2SC3330	TRANSISTOR		
⚠	Q 904	2SD882(P,Q)	TRANSISTOR	SW8V REG	
	Q 905	DTA114ES	TRANSISTOR		
⚠	Q 906	2SC3330	TRANSISTOR	TUB	
	Q 907	DTA114ES	TRANSISTOR		
⚠	Q 908	2SD882(P,Q)	TRANSISTOR	CDB	
	Q 909	DTC144ESA-T	TRANSISTOR		
	Q3201	2SC2001(L,K)	TRANSISTOR		
	Q3202	2SC2001(L,K)	TRANSISTOR		
	R 103	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 104	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 105	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 106	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R 107	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 108	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
	R 109	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 110	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 111	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 112	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 115	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 116	QRD161J-113	CARBON RESISTOR	11K 5% 1/6W	
	R 117	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R 119	QRD161J-753	CARBON RESISTOR	75K 5% 1/6W	
	R 120	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 123	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 124	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 125	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 127	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R 130	QRD161J-121	CARBON RESISTOR	120 5% 1/6W	
	R 203	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 204	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 205	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 206	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R 207	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R 208	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
	R 209	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 210	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 211	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 212	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 215	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 216	QRD161J-113	CARBON RESISTOR	11K 5% 1/6W	
	R 217	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R 219	QRD161J-753	CARBON RESISTOR	75K 5% 1/6W	
	R 220	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 223	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 224	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 225	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 227	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R 230	QRD161J-121	CARBON RESISTOR	120 5% 1/6W	
	R 302	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 303	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 304	QRD161J-334	CARBON RESISTOR	330K 5% 1/6W	
	R 305	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 306	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 307	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 308	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
	R 309	QRD161J-472	CARBON RESISTOR	P.AMP SW	
	R 310	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 311	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 312	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 313	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 315	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 316	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 322	QRD161J-473	CARBON RESISTOR	TU DATA PULL UP	
	R 701	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
	R 702	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 703	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 704	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
	R 705	QRD161J-331	CARBON RESISTOE	330 5% 1/6W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 706	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 707	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 708	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 709	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 710	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 711	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 712	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 713	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 714	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R 715	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 716	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 717	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 718	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 720	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 721	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 722	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 723	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 724	QRD161J-222	CARBON RESISTOR	10K NG	
	R 725	QRD161J-222	CARBON RESISTOR	10K NG	
	R 726	QRD161J-222	CARBON RESISTOR	10K NG	
	R 727	QRD161J-222	CARBON RESISTOR	10K NG	
	R 728	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 729	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 730	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 731	QRD161J-363	CARBON RESISTOR	36K 5% 1/6W	
	R 732	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 733	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 734	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 735	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 736	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 737	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 738	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 739	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 740	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 741	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 742	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 743	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 744	QRD161J-243	CARBON RESISTOR	24K 5% 1/6W	
	R 745	QRD161J-243	CARBON RESISTOR	24K 5% 1/6W	
	R 746	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 747	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 748	QRD161J-223	CARBON RESISTOR	REMOCON	
	R 750	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 751	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 752	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 753	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 754	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 755	QRD161J-103	CARBON RESISTOR	REST	
	R 756	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 757	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 758	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 759	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 760	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 761	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 762	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	

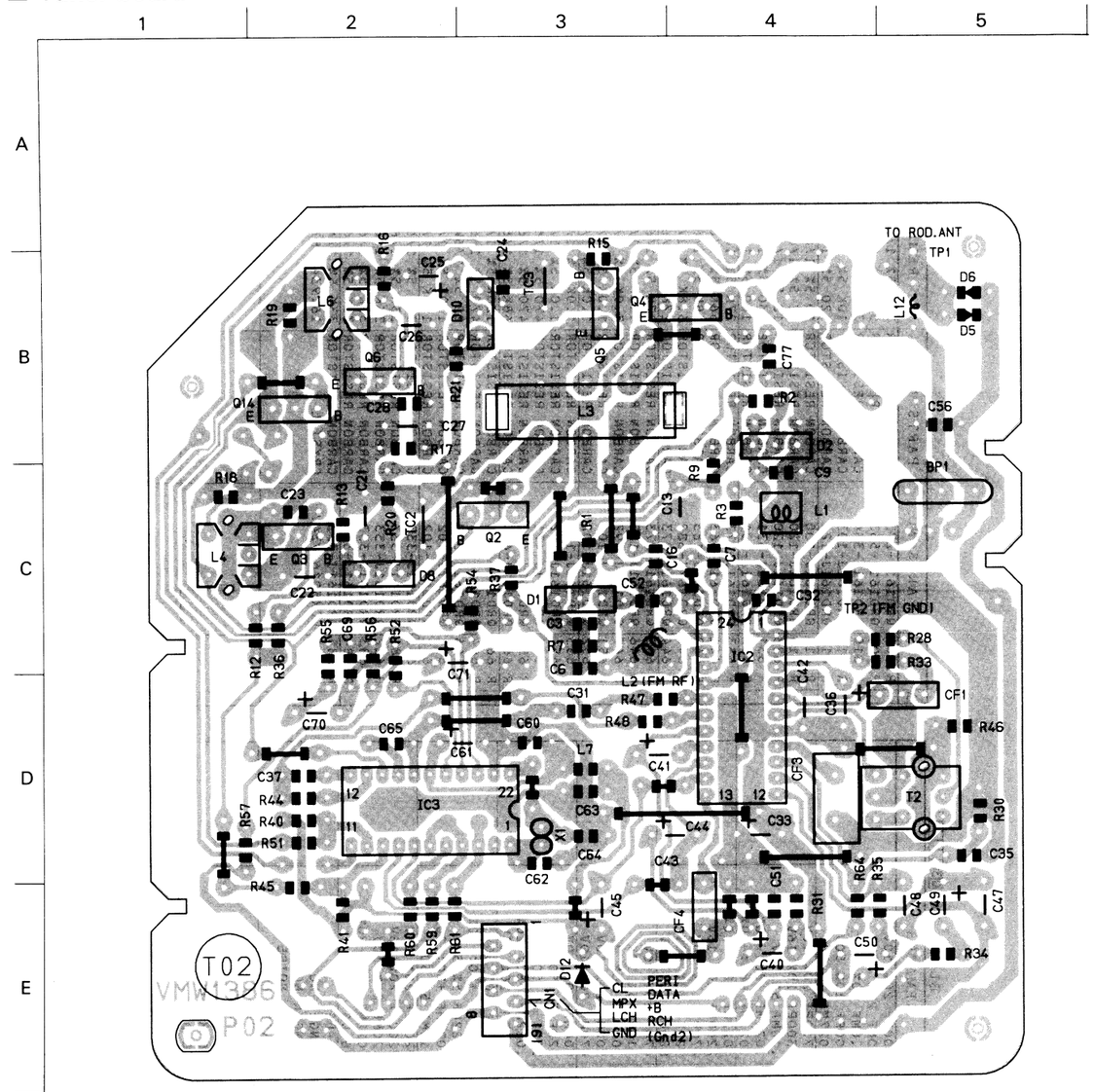
BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 763	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 764	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 765	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 766	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 767	QRD161J-472	CARBON RESISTOR	FOR Q705	
	R 768	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 769	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 770	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 771	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 772	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 773	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 774	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 775	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 776	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 777	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 778	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 779	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 783	QRD161J-221	CARBON RESISTOR	BACK LIGHT	
	R 789	QRD161J-103	CARBON RESISTOR	VER	
	R 791	QRD161J-104	CARBON RESISTOR	REEL PLS PULL U	
	R 795	QRZ0077-4R7X	FUSE RESISTOR	BACK LIGHT	
	R 796	QRD161J-104	CARBON RESISTOR	FOR Q705	
	R 797	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R 851	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 852	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 853	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
	R 854	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 855	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 856	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 857	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
	R 859	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 860	QRD161J-242	CARBON RESISTOR	2.4K 5% 1/6W	
	R 861	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 862	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 863	QRD161J-243	CARBON RESISTOR	24K 5% 1/6W	
	R 865	QRD161J-361	CARBON RESISTOR	360 5% 1/6W	
	R 902	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 903	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 904	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
⚠	R 905	QRZ0077-4R7X	FUSE RESISTOR	4.7 1/0W	
	R 908	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 909	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
	R 910	QRD161J-181	CARBON RESISTOR	180 5% 1/6W	
	R 911	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 912	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 913	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 914	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 916	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R1101	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
	R1103	QRD161J-432	CARBON RESISTOR	4.3K 5% 1/6W	
	R1105	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R1106	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R1107	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R1108	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R1109	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	

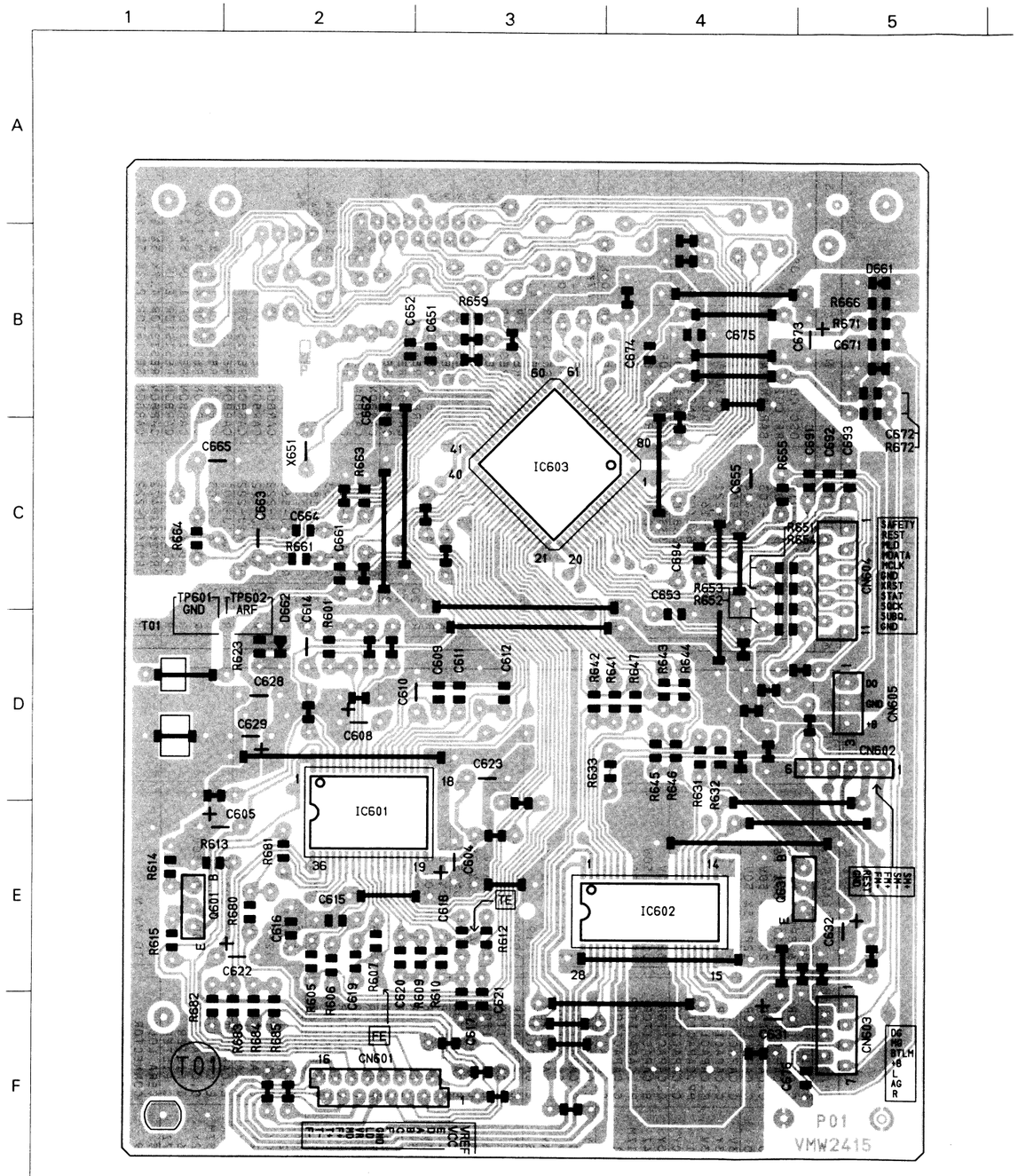
BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R1111	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R1112	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R1201	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R2101	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
	R2103	QRD161J-432	CARBON RESISTOR	4.3K 5% 1/6W	
	R2105	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R2106	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R2107	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R2108	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R2109	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
	R2111	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R2112	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R2201	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R3102	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R3103	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
	R3104	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R3105	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
⚠	R3201	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
	R3202	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R3203	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R3204	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R3205	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
⚠	R3207	QRD167J-4R7	CARBON RESISTOR	4.7 5% 1/6W	
	R3214	QRD161J-474	CARBON RESISTOR	470K 5% 1/6W	
	R3215	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	S 851	QSQ4H11-V10Z	TACT SWITCH	VOL-	
	S 852	QSQ4H11-V10Z	TACT SWITCH	VOL+	
	S 853	QSQ4H11-V10Z	TACT SWITCH	AHB	
	S 854	QSQ4H11-V10Z	TACT SWITCH	SOUND	
	S 855	QSQ4H11-V10Z	TACT SWITCH	ENTER	
	S 856	QSQ4H11-V10Z	TACT SWITCH	FF	
	S 857	QSQ4H11-V10Z	TACT SWITCH	STOP	
	S 858	QSQ4H11-V10Z	TACT SWITCH	REW	
	S 859	QSQ4H11-V10Z	TACT SWITCH	ONE TOUCH REC	
	S 860	QSQ4H11-V10Z	TACT SWITCH	PLAY MODE	
	S 861	QSQ4H11-V10Z	TACT SWITCH	CD	
	S 862	QSQ4H11-V10Z	TACT SWITCH	TUNER	
	S 863	QSQ4H11-V10Z	TACT SWITCH	TAPE	
	S 864	QSQ4H11-V10Z	TACT SWITCH	PRESET	
	S 865	QSQ4H11-V10Z	TACT SWITCH	POWER	
	S 866	QSP2K21-V01	PUSH SWITCH	CD OPEN/CLOSE	
	S3201	QSS7A13-V05	BEAT CUT SWITC	BEAT CUT SW(TKR	
	TAB	VMZ0015-002	POST PIN	FOR BATT GND	
	TAB	VMZ0015-005	POST PIN	FOR CN993 WIRE	
	VR321	QVPA603-473A	V RESISTOR	BIAS ADJ	
	X 701	M2Z4.19	CERA LOCK		

■ Tuner board


1
2
3
4
5
A
B
C
D
E
F
G
TO ROD.ANT
TP1
D6
D5
L12
C56
BP1
L1
C77
D2
C9
R2
R9
R3
C13
C6
C7
C32
TP2 IFM GND
C31
L2 (FM RF)
R47
R48
C41
L7
C63
C64
C62
X1
C45
C43
GF4
C40
C50
R34
C42
C36
C53
C33
C44
R64
R35
R31
C48
C49
C47
R30
C35
R46
CF1
R28
R33
IC2
IC3
Q1
Q2
Q3
Q4
Q5
Q6
D1
D8
D10
D12
L3
L4
L6
C70
C65
C61
C60
C71
C37
R44
R40
R51
R57
R45
R41
R60
R59
R61
R12
R36
R55
R69
R56
R52
C22
C23
C21
C26
C28
C27
R17
R16
R19
R18
R13
R20
R21
R54
R37
C25
C24
R15
C52
C30
C1
C2
C3
C4
C5
C8
C10
C11
C12
C14
C15
C16
C17
C18
C19
C20
C29
C34
C39
C46
C51
C54
C55
C57
C58
C59
C66
C67
C68
C69
C72
C73
C74
C75
C76
C78
C79
C80
C81
C82
C83
C84
C85
C86
C87
C88
C89
C90
C91
C92
C93
C94
C95
C96
C97
C98
C99
C100
C101
C102
C103
C104
C105
C106
C107
C108
C109
C110
C111
C112
C113
C114
C115
C116
C117

■ CD amplifier board



9 Exploded view of enclosure assembly ■ Speaker section M1

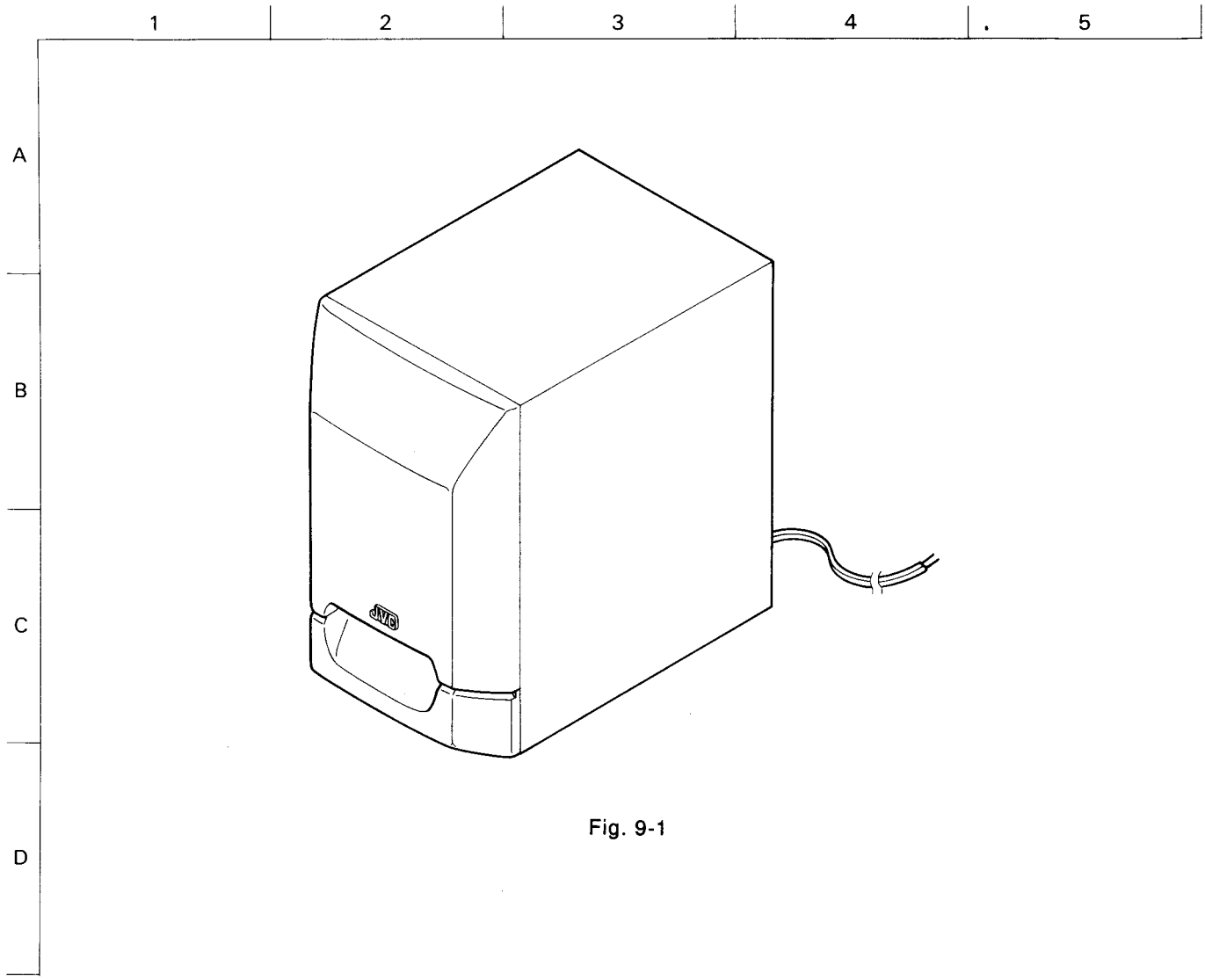


Fig. 9-1

● Speaker parts list M1

BLOCK NO. M1MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	SPKSA	DXE10K-SPBOX	SPEAKER BOX		1		

■ Enclosure section M2

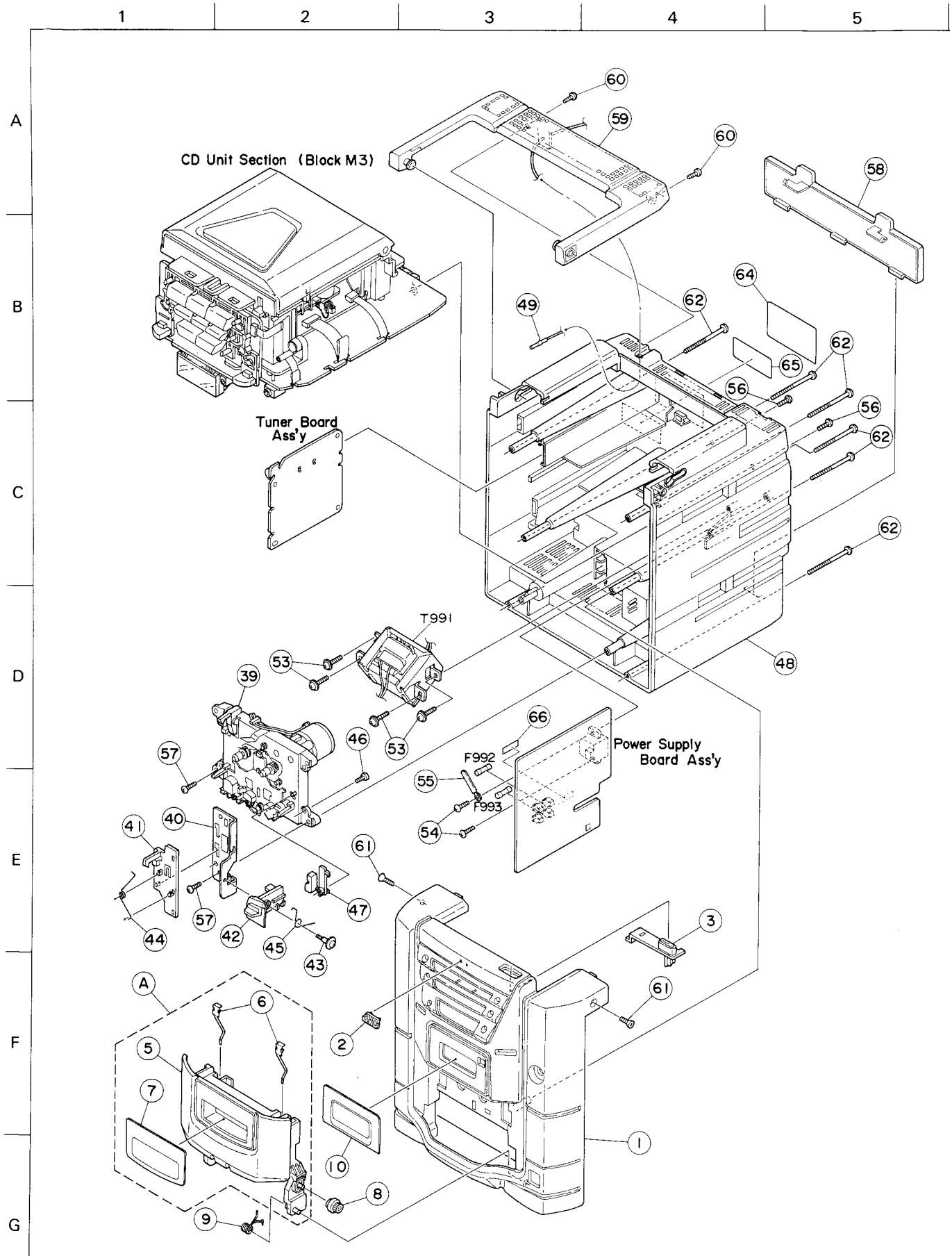


Fig. 9-2

● Enclosure parts list M2

BLOCK NO. M2MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	ZCDXE10K-CB	CASSETTE DOOR	NO.5-7	1		
	1	VJG1462-004	FRONT PANEL		1		
	2	VJD5471-001	JVC MARK		1		
	3	VXP3851-002	CD EJECT BUTTON		1		
	5	VJT2382-001	CASSETTE DOOR	GREASE G501	1		
	6	VKY4180-001	CASSETTE SPRING		2		
	7	VJT4240-001	CASSETTE LENS		1		
	8	VYH7366-001MM	GEAR	GREASE G330	1		
	9	VKW5269-001	DOOR SPRING		1		
	10	VJE3022-001	LCD LENS		1		
	39	----------	C.MECHA ASSY		1		
	40	VYH8135-001	BRACKET		1		
	41	VYH3975-001	SLIDER	GREASE FG87HS	1		
	42	VXP3853-001	EJECT KNOB		1		
	43	E406293-001	SPECIAL SCREW		1		
	44	VKW5271-001	SPRING		1		
	45	VKW5272-001	SPRING		1		
	46	SDST3006Z	SCREW		1		
	47	VYH8137-001	EJECT ARM(R)	GREASE G501	1		
	48	VJG1465-004	REAR CABINET		1		
	49	VWE240-B4SAA0	ANT WIRE		1		
	53	GBSF3014Z	T.SCREW	FOR TRANS	4		
	54	SBSF3012Z	SCREW	FOR AC JACK	2		
	55	VKZ4001-111	WIRE HOLDER		1		
	56	SBSF3010Z	SCREW	FOR SP TARMINAL	2		
	57	SBSF3014Z	SCREW	C.MECHA	2		
	58	VJC2582-001	COVER	BATT.	1		
	59	VJD2487-001	COVER	HANDLE	1		
	60	SBSF3010N	SCREW	COVER	2		
	61	SSSF3010M	SCREW	FRONT SIDE	2		
	62	SBSF3050Z	SCREW	FRONT+REAR	6		
⚠	64	VYN9305-C002T	NAME PLATE		1	B	
⚠		VYN9305-C015T	NAME PLATE		1	E	
⚠		VYN9305-C019T	NAME PLATE		1	EN	
⚠		VYN9305-C008T	NAME PLATE		1	G	
	65	E70891-001	CLASS 1 LABEL		1		
⚠	66	VND4003-081	FUSE LABEL	FOR F992	1		
⚠	F 992	QMF51E2-2R5J1	FUSE	SEC AC(ALL)	1		
⚠	F 993	QMF51E2-2R5J1	FUSE	SEC DC(E/U)	1		
⚠	T 991	VTP57J2-12B	POWER TRANS	AC230V	1		

■ Enclosure section M3

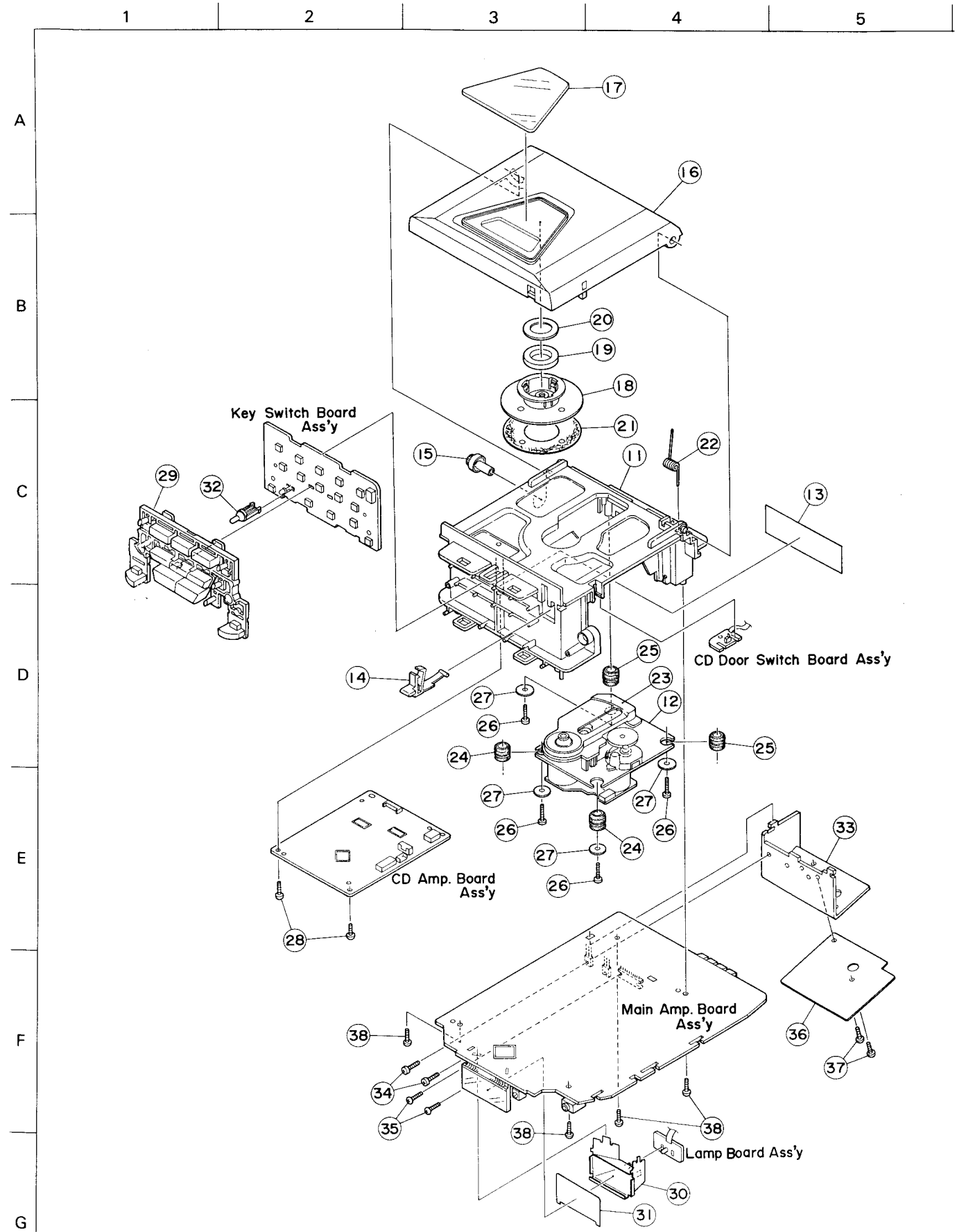


Fig. 9-3

● Enclosure parts list M3

BLOCK NO. M3MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	11	VJG1464-001UL	CD CASE		1		
	12	----------	CD MECHA(S.P.)	S PICK	1		
	13	E406709-001	LASER CAUTION		1		
	14	VYH8130-001	LOCK ARM		1		
	15	VYH4769-002	GEAR	GREASE G332	1		
	16	VJT1057-002	CD DOOR	GREASE G501	1		
	17	VJT3390-001	CD DOOR LENS		1		
	18	VKS3800-001	CLAMPER		1		
	19	VYH7313-003	MAGNET		1		
	20	VYH7314-001	YOKE		1		
	21	VYH7315-303	PAD		1		
	22	VKW5270-001	CD DOOR SPRING	GREASE G501	1		
	23	VJE3021-001	PICK COVER		1		
	24	VYH8132-001	INSULATER		2		
	25	VYH8132-003	INSULATER		2		
	26	SDSF2614Z	SCREW		4		
	27	QYWSS28D010Z	WAHER		4		
	28	SBSF3010Z	SCREW	CD AMP PCB	2		
	29	VXP5360-00A	BUTTON ASS'Y		1		
	30	VYH3976-001	LCD HOLDER	LCD/SW PCB	1		
	31	VYH8142-001	SHEET	LCD	1		
	32	VJD5499-001	LED LENS	LCD/SW PCB	1		
⚠	33	VYH3972-002	HEAT SINK	MAIN AMP PCB	1		
	34	SDSP3010Z	SCREW	HEAT SINK+IC	2		
	35	SBSF3010Z	SCREW	HEAT SINK+IC	2		
⚠	36	VYH8164-001	SHIELD		1		
	37	SBSF3008Z	SCREW	SHIELD+IC	2		
	38	SBSF3010Z	SCREW	CD CASE+M.AMP P	4		

10 Exploded View of Mechanism assembly ■ Cassette mechanism

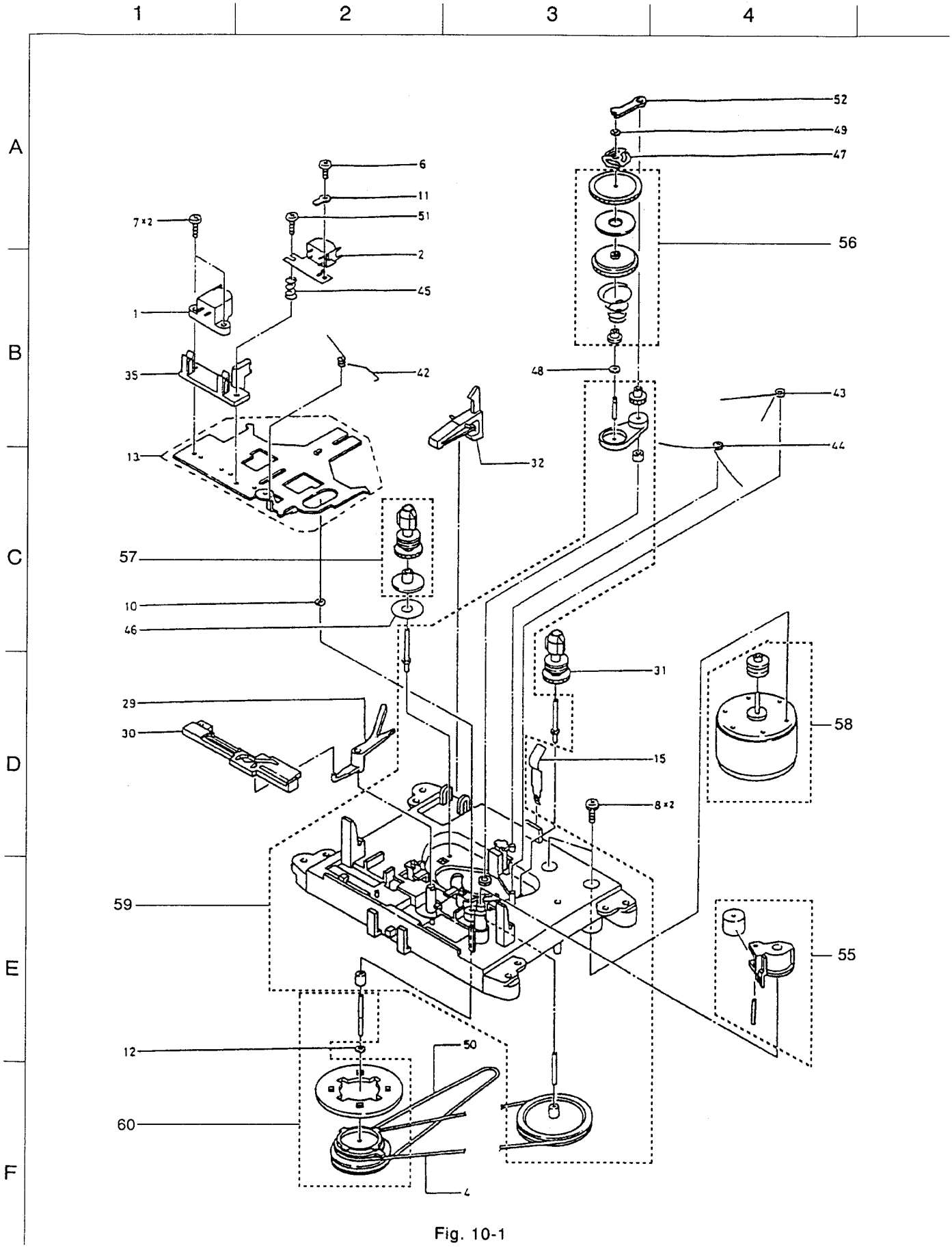


Fig. 10-1

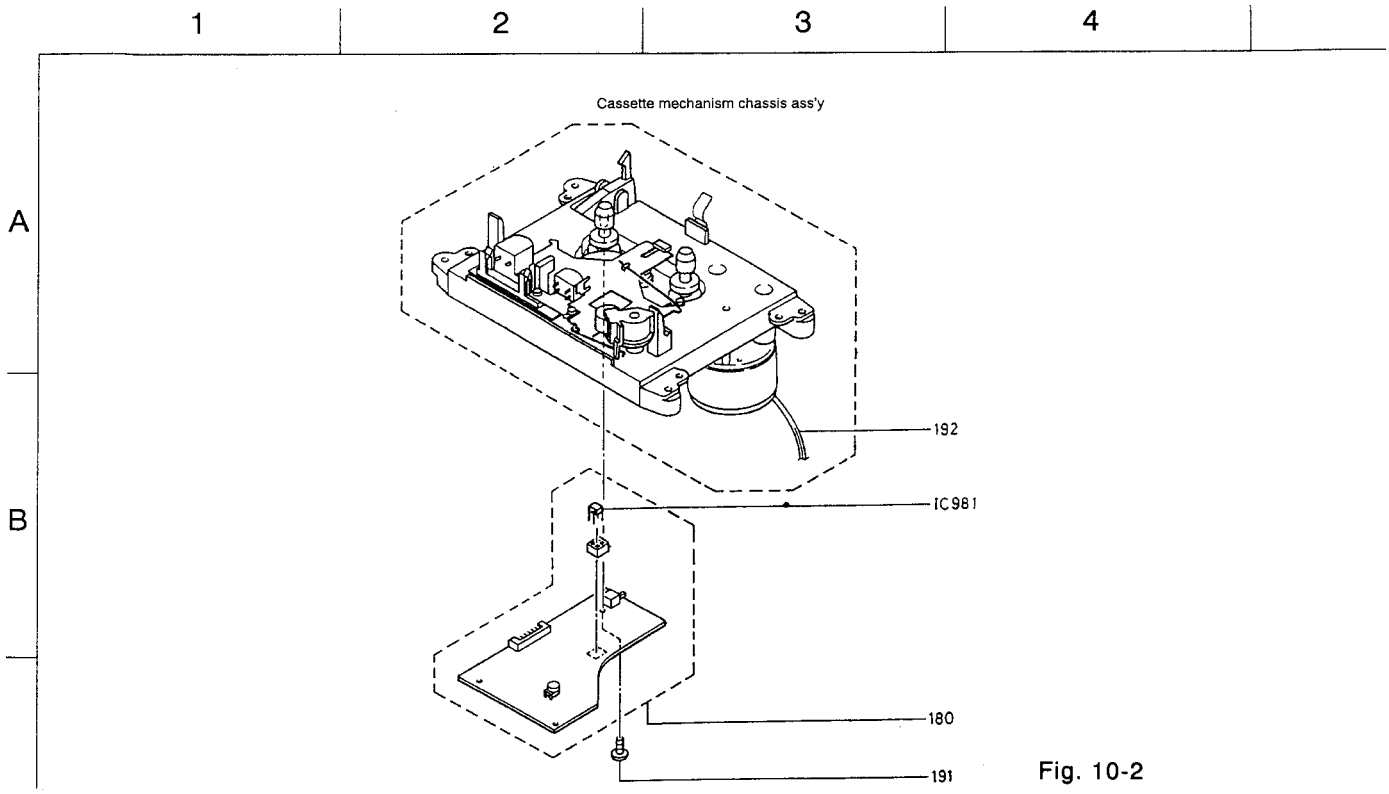


Fig. 10-2

● Cassette mechanism parts list

BLOCK NO. M4MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	0021-176-0-0013	ERASE HEAD	TC231F	1		
	2	0021-447-0-0013	R/P HEAD	TC951	1		
	4	0056-226-0-00	BELT	FOR CAPSTAN	1		
	6	0971-420-0-35	SCREW	B2 X 3-SK	1		
	7	0971-420-0-61	SCREW	B2 X 6-SN	2		
	8	0971-826-0-41	SCREW	P2.6 X 4-SN-S	2		
	10	0986-402-7-00	WASHER	WPC140034040	1		
	11	0987-100-2-00	WASHER	WL020100030B1	1		
	12	0987-400-3-00	WASHER	WP021040025	1		
	13	2400-105-1-00	HEAD BASE SET		1		
	15	2400-182-0-00	PACK SPRING		1		
	29	2400-258-0-00	LOCK ARM A		1		
	30	2400-257-3-00	LOCK ARM B		1		
	31	2400-259-1-00	REEL BASE		1		
	32	2400-273-0-00	REC SW. LEVER		1		
	35	2400-263-0-00	HEAD SUPPORTER		1		
	42	2400-403-0-00	SPL SPRING B		1		
	43	2400-404-0-00	SPL SPRING C		1		
	44	2400-405-0-00	SPL SPRING D		1		
	45	2400-410-0-00	COM SPRING C		1		
	46	2400-302-0-00	P.SENSOR MILLOR	PHOTO SENSOR	1		
	47	2400-181-1-00	FRICTION SPRING		1		
	48	0987-407-8-00	WASHER	WP062110080	1		
	49	0987-407-9-00	WASHER	WP0160.0025	1		
	50	0056-225-0-00	BELT	FOR PULLEY	1		
	51	9707-020-6-05	SCREW	SE3NSP2060SN	1		
	52	2400-272-0-00	KICK ARM		1		
	55	2400-602-1-00	P.ROLLER ASS'Y	PINCH ROLLER	1		
	56	2400-604-0-00	CLUTCH ASS'Y		1		
	57	2400-606-0-00	REEL BASE ASS'Y		1		
	58	2400-607-0-00	MOTOR ASS'Y		1		
	59	2400-608-0-00	MECHA CHASSIS	ASS'Y PARTS	1		
	60	2400-609-0-00	FLYWHEEL ASS'Y		1		
	180	2400-003-0-00	GOVERNOR UNIT		1		
	191	0972-920-0-65	PT SCREW P2006-	P2006-SK	1		
	192	2400-550-0-00	FLAT CABLE 2P		1		
	IC981	SG-105F-BCD	PH SENSOR		1		

■ CD mechanism

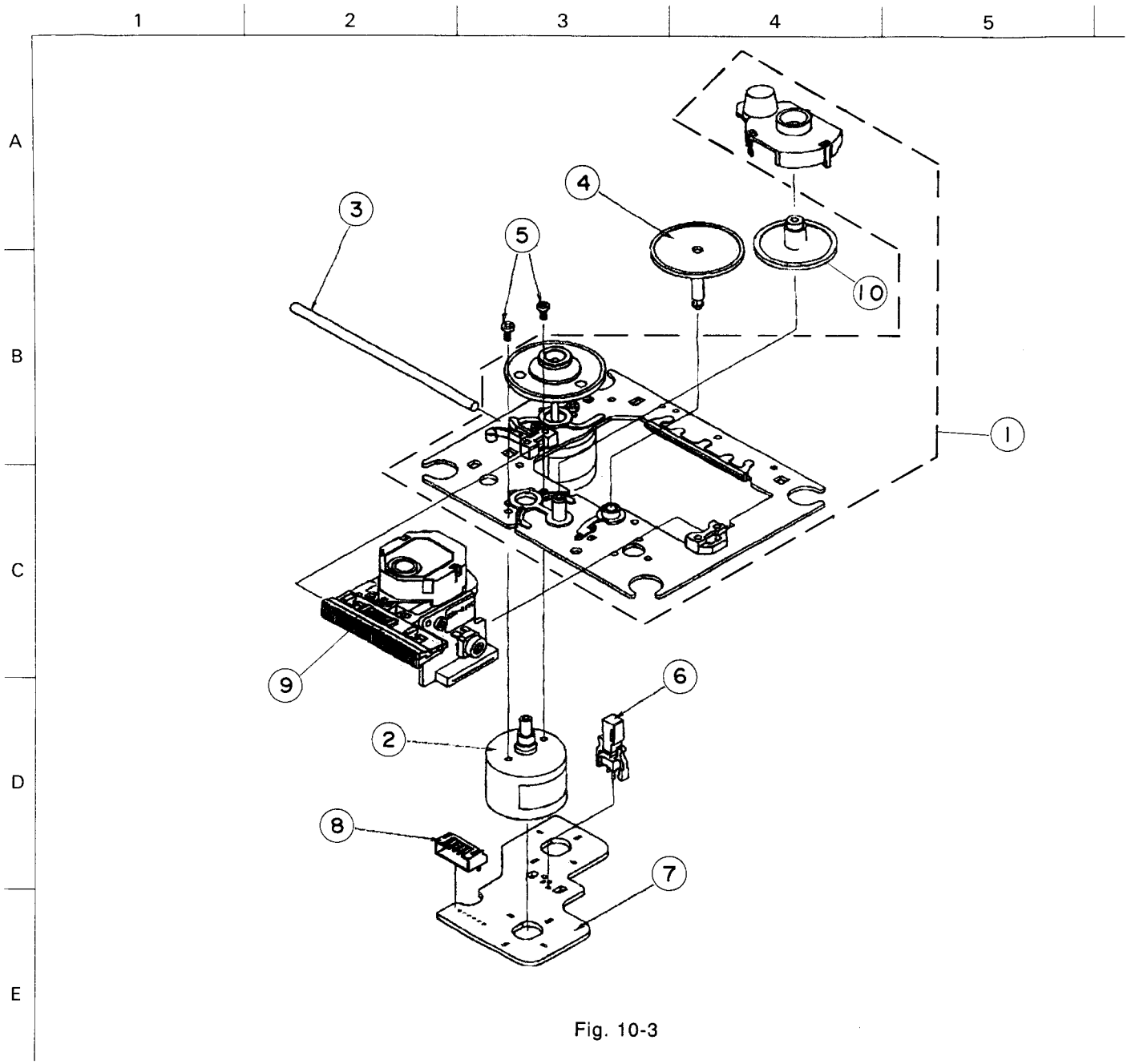


Fig. 10-3

● CD mechanism parts list

BLOCK NO. M5MM□□□

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	X-2626-202-1	MOTOR CHASSIS		1		
	2	X-2625-769-1	MOTOR GEAR		1		
	3	2-626-908-01	SLED SHAFT		1		
	4	2-626-907-01	GEAR A		1		
	5	7-621-255-15	SCREW		2		
	6	1-572-085-11	LEAF SWITCH		1		
	7	1-639-678-12	MOTOR BOARD		1		
	8	1-564-722-11S	CONNECTOR		1		
	9	8-848-483-05	PICK ASS'Y		1		
	10	2-627-003-01	GEAR B		1		

11 Packing

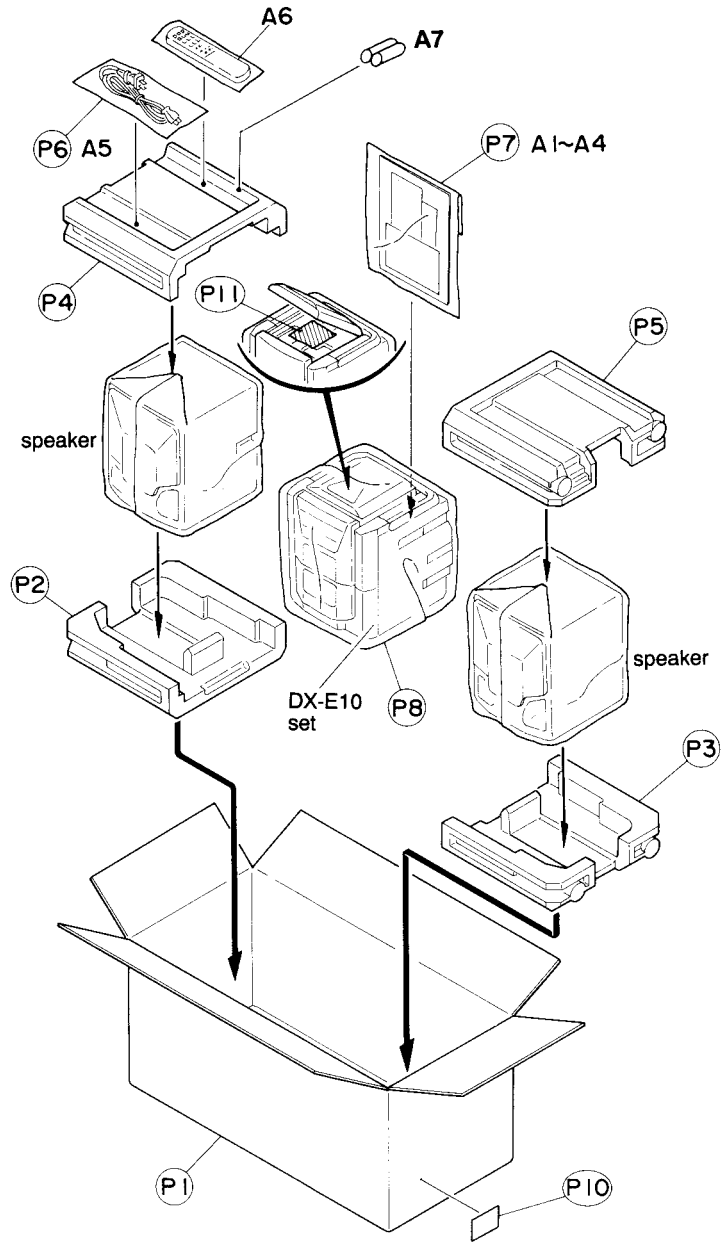


Fig. 11-1

■ Packing parts

BLOCK NO. M6MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	VPC9305-C001	CARTON		1		
	P 2	VPH1705-001	CUSHION(B.L)		1		
	P 3	VPH1705-002	CUSHION(B.R)		1		
	P 4	VPH1705-003	CUSHION(U.L)		1		
	P 5	VPH1705-004	CUSHION(U.R)		1		
	P 7	VPE3005-007	POLY BAG	FOR INSTRUCTION	1		
	P 8	VPE3026-005	POLY BAG	SET	1		
	P 10	VND3115-001	LABEL	DO NOMI	1		
	P 11	VPK4002-041	SHEET	CD DOOR IN SIDE	1		
	P 12	QPGA015-03503	POLY BAG	FOR POWER CORD	1		

■ Accessories

BLOCK NO. M6MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
⚠	A 1	VNN9305-251C	INSTRUCTIONS		1	E	
⚠		VNN9305-271C	INSTRUCTIONS		1	EN	
⚠		VNN9305-261C	INSTRUCTIONS		1	E,EN,G	
⚠		VNN9305-671C	INSTRUCTIONS		1	B,E,EN	
⚠	A 2	BT-54006-1	WARRANTY CARD		1	G	
⚠		BT-54003-1	WARRANTY CARD		1	B	
	A 3	BT-20066A	SERVICE NIT LIS		1		
	A 4	E43486-340B	SAFETY INST		1		
⚠	A 5	QMP5520-183BS	POWER CORD		1	B	
⚠		QMP39F0-183	POWER CORD		1	E,EN,G	
	A 6	VGR0061-101	REMOCON	RM-RXP1010	1		
	A 7	R6PRPA-2STSA	BATTERY		2		

JVC
VICTOR COMPANY OF JAPAN, LIMITED
AUDIO PRODUCTS DIVISION 10-1, 1-chome, Ohwatari-machi, Maebashi-city, Japan

Printed in Ja
-H0903-S-